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RWANDA HUMAN RESOURCES ASSESSMENT FOR HIV/AIDS SERVICES SCALE-UP

PHASE 2 REPORT: SAMPLE SITE DATA COLLECTION AND ANALYSIS

QUALITY ASSURANCE PROJECT

OPERATIONS RESEARCH RESULTS

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Phase 2 Report: Sample Site Data Collection and Analysis

March 2006

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EXECUTIVE SUMMARY

This report presents findings from Phase 2 of the Rwanda Human Resources Assessment for HIV/AIDS Services Scale-up. The study aimed to review the existing staffing situation in the country, document practices and levels of effort in providing HIV/AIDS services, and calculate staffing needs for planned expansion of antiretroviral treatment. Phase 2 of this study describes current systems of HIV/AIDS services in Rwanda by documenting categories of staff and the specific HIV/AIDS services they perform, comparing performance to national standards, and analyzing the time required to provide these different services. The study also looks at the adequacy of current management and supervision of personnel providing HIV/AIDS services and the country's HIV/AIDS training capacity.

Information on which the Phase 2 analysis was based was derived from 283 observations of providers with HIV/AIDS clients, record reviews, and interviews with District Health Management Teams, site managers, training coordinators, and 93 service providers at 20 sample sites. The sample sites examined in Phase 2 included both public facilities managed by the Ministry of Health and *agrée* sites (those managed by religious institutions but that are considered to be part of the public health system). Fifteen of the sites yielded information on voluntary counseling and testing (VCT) services, 12 sites on prevention of mother-to-child transmission (PMTCT) services, and eight sites on antiretroviral therapy.

Health districts are the operational units responsible for implementing national strategies and managing the delivery of health services in Rwanda's decentralized health system. District managers interviewed expressed confusion over roles and responsibilities in managing HIV/AIDS services and said that they felt "left out" of the management of HIV/AIDS services. In practice, HIV/AIDS services continue to be managed from the central level by the Treatment Research on AIDS Center (TRAC), an arm of the Ministry of Health. HIV/AIDS service statistics are routed to TRAC through the districts, but districts do not take an active role in reviewing or analyzing the information. Several donor agencies had contracts directly with facilities for the provision of HIV/AIDS services, often providing significant resources to the facilities to pay for equipment, supplies, staff training, and salaries. Several district teams noted that while they had been trained to supervise HIV/AIDS activities, transportation to conduct supervision was severely limited.

In Rwanda, VCT includes HIV/AIDS pre-test counseling, testing, and post-test counseling provided to general clients. PMTCT includes the same steps as VCT but is provided to pregnant women during ante-natal care (ANC) visits and includes additional information about reproductive health, infant feeding options, and prophylactic treatment to prevent transmission of HIV to the infant. It also frequently includes testing of partners of PMTCT clients. All VCT and PMTCT sites in Rwanda are using rapid HIV tests and provide same-day results. Following TRAC guidelines, all sites provide group information, education, and communication (IEC) sessions preceding individual pre-test counseling. PMTCT services are usually offered two days per week at facilities throughout the country. VCT services are offered either two or five days a week, depending on the site.

At the VCT sites, a high proportion (90-100%) of clients who received pre-test counseling was indeed tested and received post-test counseling. Throughput of PMTCT clients was also quite high in 11 of the 13 facilities with data: 89-100% of all ANC clients received post-test counseling. The remaining two facilities reached 10% and 12%, respectively, of ANC clients.

The study found that all the health facilities included in the study charge their clients for VCT, at an average cost of FR320 (US$0.56). In contrast, testing is provided free of charge to pregnant women and their partners as part of PMTCT services. Public and *agrée* sites are attracting and serving about the same number of clients on average, but *agrée* sites are serving more clients per full-time equivalent (FTE) service provider. For VCT, each FTE service provider sees an average of 86 clients per month at *agrée* sites, whereas each FTE service provider at public sites attends only about 61 clients per month. Similar

differences were found for PMTCT service sites: 62 clients being served per FTE service provider per month at *agrée* sites and only 54 clients per FTE service provider per month at public sites. These differences are attributable to better service organization and staff management at *agrée* sites.

In looking at the quality of VCT and PMTCT service provision, the study found that VCT services met acceptable levels (70% or higher compliance with standards) at only three of the 14 sites observed. Pre-test counseling performance was the weakest, while post-test counseling for HIV-positive clients was the strongest, perhaps because providers focus their efforts on HIV-positive clients. Provider performance in PMTCT services was lower on average than for VCT. In general, however, clients were given few opportunities to ask questions or discuss client-specific needs or issues. The study found that the average time needed to meet 70% compliance or higher with counseling standards was 32 minutes per VCT client and 33 minutes per PMTCT client.

The majority of VCT and PMTCT service providers are nurses (50%), followed by social workers (15%). Only 7% of the VCT/PMTCT workforce was made up of auxiliary personnel, despite the fact that they make up 23% of the overall health workforce in Rwanda. Interestingly, the study found that the highest level of performance for both VCT and PMTCT was achieved by auxiliary staff: 76% compliance with VCT standards and 80% compliance with PMTCT standards across all stages of counseling. This finding was attributed primarily to the fact that lower-level staff has more time to do counseling than do higher-level worker categories and suggests that lower-skilled workers can competently counsel VCT and PMTCT clients.

Antiretroviral therapy (ART) services are provided mainly by physicians and trained A1-level nurses and social workers. The study found that the quality of ART services was generally quite high, although some key tasks—like the initial comprehensive exam and ensuring patient compliance with antiretroviral regimens—were omitted. It also found that the absence of electronic databases at sites offering ART services make it very difficult to monitor the services provided to patients.

While most (91%) HIV/AIDS service providers had received training to provide HIV/AIDS services, the study found that little technical supervision of HIV/AIDS services takes place at the facility level and that HIV/AIDS services are not clearly incorporated into the regular Directorate of Health Care supervision system.

Despite perceived low salaries and heavy workloads, 74% of health workers interviewed stated that they were satisfied or even very satisfied with their jobs and were primarily motivated by the desire to help persons living with HIV/AIDS. Service providers identified salary as the most common source of dissatisfaction and the principal reason for staff losses. Salary differences resulting from a recent bonus given to government employees created added frustration and challenges for health facilities. Staff attrition was highest among doctors and at referral hospitals and thus particularly impacts ART services, which involve higher-level staff and are offered at hospitals.

Finally, the study also looked at existing training capacity and the structure of training programs for HIV/AIDS services. Overall, in-service training programs are addressing VCT, PMTCT, and ART service delivery needs more efficiently than pre-service training programs, which are general and do not address counseling skills. All in-service training programs are either sending trainees to TRAC to be trained or are using TRAC curricula and TRAC-trained trainers, while pre-service training programs are not well integrated with national HIV/AIDS guidelines. Most in-service training programs focus on nurses who are level A2 or higher. Overall, 81% of the staff interviewed who had been trained in HIV/AIDS service provision were still active in HIV/AIDS service delivery.

ABBREVIATIONS

ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral
CAMERWA	Central Medical Stores
CCM	Country Coordinating Mechanism (Global Fund)
CDC	Centers for Disease Control and Prevention (United States)
CEFOCK	Center for Continuing Medical Education (Kigali Health Institute)
CHK	Central Hospital of Kigali
CRIS	*Centre Rwandais d'Information sur le SIDA* (Rwandan Center for AIDS Information)
DSS	Direction de Soins de Santé (Directorate of Health Care)
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
ESTHER	*Ensemble de Solidarité Thérapeutique Hospitalière en Réseau* (Lux Development)
EU	European Union
FHI	Family Health International
FOSA	*Formation Sanitaire* (Health Facility)
FR	*Francs Rwandais* (Rwandan Francs)
FTE	Full-time Equivalent
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HMIS	Health Management Information System
IEC	Information, Education, and Communication
IMPACT	Implementing AIDS Prevention and Care (Family Health International)
KHI	Kigali Health Institute
MAP	Multi-Country HIV/AIDS Program for Africa (World Bank)
M&E	Monitoring and Evaluation
MOH	Ministry of Health
NGO	Nongovernmental Organization
NRL	National Reference Laboratory
NUR	National University of Rwanda
OI	Opportunistic Infections
PEPFAR	President's Emergency Plan For AIDS Relief
PLWHA	People Living With HIV/AIDS
PMTCT	Prevention of Mother-to-Child Transmission
PSI	Population Services International
QAP	Quality Assurance Project
STI	Sexually Transmitted Infection
TOT	Training of Trainers
TRAC	Treatment and Research AIDS Center
UNICEF	United Nations Children's Fund
US	United States
USAID	United States Agency for International Development
USD	United States Dollar

VCT	Voluntary Counseling and Testing
VCTI	VCT *Intégrée* (Integrated Services for VCT, PMTCT, and Treatment of Opportunistic Infections)
WHO	World Health Organization

I. INTRODUCTION

A. Background to Phase 2

The Government of Rwanda aims to scale up HIV/AIDS service provision to treat 100,000 clients by 2007 (TRAC 2004). In order to do so it will need an adequate number of staff with the right training and qualifications. Rwanda, like many developing nations, faces acute shortages in its health workforce. The ratio of physicians to the population, 1: 41,000 (2003), is four times lower than the minimum of 1:10,000 recommended by the World Health Organization (WHO) (Kombe, Galaty et al. 2005). The ratio of nurses to the population in Rwanda, 1: 3,300, is more than three times lower than the average for sub-Saharan Africa (WHO 2004). Rwanda faces the significant challenge of having to rapidly increase the number of staff providing HIV/AIDS services without negatively affecting the provision of other health services.

The Rwanda Human Resources Assessment for HIV/AIDS services scale-up was commissioned by the Government of Rwanda and United States Agency for International Development (USAID) to assess the existing staffing situation in the country, document HIV/AIDS service provision practices and level of effort, and calculate staffing requirements for scale-up. The study, divided into three phases, examines current staffing in the health sector (Phase 1) and then identifies categories of staff being used to provide HIV/AIDS services, what services these staff are actually performing, and how long it takes them to provide these services (Phase 2). By documenting current staffing levels and the level of effort undertaken to provide HIV/AIDS services, the study aims to assess how many staff will be needed and at what costs, if the Government of Rwanda is to meet its HIV/AIDS service delivery objectives (Phase 3).

This report presents findings from Phase 2 of the study and documents current HIV/AIDS service delivery practices; the time it takes to provide services; the cadres currently offering voluntary counseling and testing (VCT), prevention of mother-to-child transmission (PMTCT), and antiretroviral therapy (ART) services; and the training of HIV/AIDS service provision staff.

B. Study Purpose and Objectives

The overall purpose of the Rwanda Human Resources Assessment for HIV/AIDS Services Scale-up was to assist the Government of Rwanda in determining how many staff and of what type will be required to reach national service delivery objectives.

Phase 2 of the study contributed to this overall aim by addressing the following objectives:

- Describe models of care for VCT, PMTCT, and ART, detailing specific services provided;
- Analyze the time it takes to carry out the tasks involved in each of the services and identify tasks that cannot be carried out due to lack of staff, time, or other resources;
- Describe the present workforce involved in providing these services, covering their qualifications and additional training, supervision, and technical support provided; and
- Assess the adequacy of the present training capacity (in terms of numbers of persons trained) in the country and define the possible need for extra training facilities and trainers in qualitative and quantitative terms, including costs of increasing training capacity and courses.

Data collection for Phase 2 of the study sought to address the following main questions:

- What types and numbers of staff are required to provide VCT, PMTCT, and ART services in integrated and vertical settings?
- How much time does it take for service providers to complete VCT, PMTCT, and ART service delivery tasks?

- How does the use of volunteers, people living with HIV/AIDS (PLWHA), or other support groups affect the requirements for professional health staff at service sites?
- What motivates professional staff and volunteers to provide VCT, PMTCT, and ART services?
- How many training institutions (in-service and pre-service) currently exist, what is their capacity (capacity in terms of numbers of trainers and numbers of students), and what curricula exist for HIV/AIDS training?
- What staffing costs are associated with providing HIV/AIDS services—including salaries, allowances, bonuses or other incentives—for different models of service delivery?

II. STUDY DESIGN

A. Conceptual Framework

1. Categories of HIV/AIDS Services

The study focused on three categories of service: VCT, PMTCT, and HIV/AIDS care and support, specifically antiretroviral therapy. The latter two categories involve the use of antiretroviral drugs, which are a major focus of the scale-up of HIV/AIDS services in Rwanda. As the "gateway" to HIV/AIDS care and support and the foundation of prevention and behavior change, VCT is critical to national objectives for antiretroviral treatment and HIV/AIDS prevention. Consequently, VCT must be scaled-up if the government is to reach its objectives for ART service provision and decreasing the spread of the virus. The quality of VCT and PMTCT services are critical since clients' willingness to seek other HIV/AIDS services (ART, opportunistic infection care, psycho-social counseling) will be influenced by the initial experience of HIV/AIDS service.

2. Models of Service Delivery

a. Vertical and Integrated Service Delivery

Most HIV/AIDS services in Rwanda follow a similar model of service provision. A majority of VCT, PMTCT, and ART services are provided in *integrated* settings—settings in which HIV/AIDS services are provided as part of a larger healthcare package. Two sites in the study sample are uniquely focused on HIV/AIDS services. These sites are classified as *vertical* sites—sites that provide only HIV/AIDS services and no other health services.

b. Integrated and Dedicated Service Delivery Staff

Service delivery sites may have *dedicated* staff, *integrated* staff, or a *mixture* of dedicated and integrated service providers (Table 1). *Dedicated* staff provides HIV/AIDS services exclusively. *Integrated* staff provides HIV/AIDS services in addition to other health services. Some sites have both integrated and dedicated staff offering services. For example, site number 20, a district hospital, has one dedicated staff member who serves as the coordinator and main service provider at its VCT clinic and another 15 trained nurse/counselors who cycle in and out of the clinic at different times of the week and staff other wards on days when they are not providing service at the VCT clinic.

Integrated service providers are generally organized in one of two ways. At many health centers, providers are assigned specific days on which their time is more or less dedicated to HIV/AIDS service provision, such as VCT counseling. On other days, these same providers focus on other health services (i.e., non-HIV/AIDS related health services). In larger health centers or hospitals that have a higher client load for HIV/AIDS services, providers are often assigned on a rotational basis. These providers spend one

or more weeks in the HIV/AIDS clinic or service wing and then rotate out to other wards. It is in these larger sites as well that some dedicated staff is found. Frequently, dedicated staff present at integrated sites is supported through contracts the facility has with external agencies, such as project IMPACT. Providers offering ARV services and support are more likely to be dedicated staff than providers offering VCT or PMTCT counseling.

c. VCT, PMTCT, and ART Service Provision

Following TRAC guidelines, counseling for VCT and PMTCT routinely begins with a group information session. Most sites wait until a majority of clients are in attendance before beginning the information, education, and communication (IEC) session; a few sites conduct successive small group IEC sessions followed by pre-test counseling. All sites provide individual, confidential, pre-test, and post-test counseling for VCT and PMTCT clients.

The Government of Rwanda has a well-organized plan for the scale-up of VCT, PMTCT, and ART services. This plan includes making VCT and PMTCT available at health centers nationwide. The Global Fund, under its *VCT Intégrée* (VCTI) program, supports care for opportunistic infections (OI) at health center level as well. ART and specialized OI care will be made available at district hospitals and national referral hospitals, with a few large and well-equipped health centers also offering ART. Specialized testing for HIV-positive clients, such as CD4 count and routine liver function tests, will be carried out at selected district hospitals throughout the country. Currently, four hospitals have trained staff and equipment for routine ART testing.

The approach to client care varies by HIV/AIDS service. Counseling for VCT continues to be offered as a wholly voluntary service, whereas most PMTCT sites are now offering mandatory counseling with optional testing. ART services are voluntary. At most sites, HIV-positive clients are sent to the ARV clinic or service provider where they are given an exam and a CD4 count is ordered. Clients in need of ART are listed on a potential client list. Each site that offers ART has a facility committee in charge of selecting clients for the national ART program. Since antiretrovirals (ARVs) provided in this program are free, client income, in addition to medical need, is a criterion for selection.

Most ART clients receive a single month's supply of ARV at a time. This helps sites manage their drug supply and monitor adherence. Clients who return for re-supply generally have a short visit with the HIV/AIDS physician before they are sent to an HIV/AIDS nurse or social worker trained to disburse ARV and provide counseling to clients on drug usage and adherence.

3. Service Ownership/Management

As noted in Table 1, most of the HIV/AIDS services provided in Rwanda are offered at public and *agrée* sites. Public sites are sites that are managed by the Ministry of Health. *Agrée* sites are sites that, although participating in the public health system, are managed by a religious institution (most often the Catholic Church). Staff at public sites may be paid through the civil service or may be hired on a contractual basis with funds from facility user fees. Staff at *agrée* sites may likewise be government employees or contractual staff paid through user fees, but staff at *agrée* sites may also be paid directly by the supporting church institution. The study included one nongovernmental organization (NGO) service site and one private referral hospital for comparative purposes. More NGO sites are opening in Rwanda; for example, Project San Francisco, which offers couples counseling, has several centers, and Population

Table 1: Service Delivery at Sample Sites

Site No.	Site Type	Programs Offered at Site				All Dedicated Counselors/ Care Providers	All Integrated Counselors/ Care Providers	Dedicated and Integrated Counselors/ Care Providers
		VCT	PMTCT	ART	OI/ STI			
Integrated Service Delivery Sites								
1	Public Health Center	✓					✓	
2	Public Referral Hospital		✓	✓				✓
3	*Agrée*	✓	✓				✓	
4	*Agrée*	✓	✓					✓
5	*Agrée*	✓	✓	✓	✓			✓
7	Public	✓	✓		✓		✓	
8	*Agrée* District Hospital	✓		✓	✓			✓
9	Public	✓	✓				✓	
10	*Agrée*	✓	✓		✓		✓	
11	*Agrée*	✓	✓	✓	✓	✓		✓
12	*Agrée*	✓	✓	✓	✓	✓		
13	Public	✓	✓	✓				✓
14	Private Hospital	✓	✓	✓	✓			✓
15	Public		✓					✓
16	Public	✓		✓	✓			✓
18	Public	✓	✓		✓	✓		
19	Public	✓	✓				✓	
20	Public District Hospital	✓	✓		✓			✓
Vertical Service Delivery Sites								
6	Private/NGO	✓				✓		
17	Public HIV/AIDS	✓	✓		✓	✓		

Note: STI is sexually transmitted infection.

Services International (PSI) is expected to open VCT clinics similar to the New Start centers they operate in Zambia (stand-alone clinics dedicated to anonymous VCT). The role of the private sector in providing HIV/AIDS counseling, care, and treatment in Rwanda has not been well documented. Few general service private clinics exist in Rwanda. The private facilities that do exist tend to be specialist clinics, such as dental clinics and orthopedic clinics, or nursing/hospice care centers. However, several companies are developing in-house clinics or are providing funds for their staff to access services in private hospitals or clinics. Although not private, the military also has a substantial health department which is providing HIV/AIDS services to Rwanda's military personnel.

4. Service Support

Several different donor agencies and support organizations offer financial and technical support for HIV/AIDS services in Rwanda. Among the donor agencies are USAID, President's Emergency Plan for HIV/AIDS Relief (PEPFAR), Multi-Country HIV/AIDS Program for Africa (MAP), Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), European Union (EU), Coopération Belge, and WHO. Supporting programs, many of which are funded through these donors, include: Project IMPACT (USAID/PEPFAR) implemented by Family Health International (FHI), The Human Capacity Development Project (USAID/PEPFAR) implemented by IntraHealth), EGPAF (USAID/PEPFAR/Private), QAP (USAID/PEPFAR) implemented by University Research Co., LLC,

VCTI (GFATM), and ESTHER (EU). Many institutions are providing financial support directly to health facilities through contracts. These contracts include funds for training, transportation, meetings, materials, and, in some cases, staff salaries. Programs are designed to fit into the national system for training and supervision but may include additional training or technical support from the supporting organization.

5. Compliance with Service Delivery Standards

The Treatment and Research AIDS Center (TRAC) has developed guidelines for VCT, PMTCT, and ART service counseling, care, and treatment. The study observed service delivery in each category of service to collect information on the extent to which these TRAC standards are being met and how performance to standards varied across service delivery sites and categories of service providers.

B. Study Sample

Twenty sites, listed in Table 2, were selected from the TRAC registry of service sites for VCT/PMTCT and ART service provision. A number of criteria informed site selection, including: duration of HIV/AIDS services operation (12 months minimum), stratification of site type (public, *agrée*, NGO, private, health center, district hospital, and referral hospital), representation of donors or support organizations, representation of service structure (vertical and integrated), and geographic distribution.

Fifteen sites yielded information on VCT services, PMTCT service provision was observed in 12 sites, and ARV initiation and monitoring was observed in eight sites. The Rwanda Research Coordinator and Study Team Leaders contacted all sites before the commencement of the study to explain the purpose of the research and how it would be carried out and obtained management's agreement to participate.

C. Methodology

The study team divided into two sub-teams to collect data at the 20 sample sites. Each team consisted of a team leader, a data collection assistant, and a TRAC representative. Based on logistical arrangements, Team 1 visited 11 sites and Team 2 visited nine sites. Teams spent two to four days at each site to collect data. In several cases, repeat visits were necessary to conduct enough observations or complete assessments of facility statistics. Information collected from the participating sites and districts and methods of collection are summarized in Table 3.

Data concerning support and supervision of HIV/AIDS services, coordination of HIV/AIDS services, and human resources management were collected from interviews with district health management teams. Data related to the services offered by the sites, the numbers and types of service providers, provider salaries, the training provided to these providers, and attrition of HIV/AIDS service providers were gathered through interviews with site managers and staff members. Training data were also collected directly from TRAC and supporting agencies.

Data on service statistics were collected through reviews of site records (collected at the site, not from central records) for the previous 12 months (or for the months that the site had been providing services if less than one year). Record reviews ensured that the data had been documented as part of the routine procedures at the site and any anomalies could be checked with staff that had completed the registers.

Table 2: Sample Sites

Site	Site Type	Province/District	Support Agencies	Services Observed		
				VCT	PMTCT	ART
1	Public Health Center	Butare/Kibirizi	Concern	✓		
2	Public Referral Hospital	Butare/Kabutare	UNICEF, MAP, QAP		✓	✓
3	*Agrée* Health Center	Byumba/Byumba	UNICEF, VCTI	✓	✓	
4	*Agrée* Health Center	Byumba/Byumba	IMPACT	✓	✓	
5	*Agrée* District Hospital	Gikongoro/Kigeme	WHO, IMPACT, QAP	✓		✓
6	NGO VCT Clinic	Gikongoro/Kigeme	IMPACT	✓		
7	Public Health Center	Gisenyi/Gisenyi	VCTI, QAP	✓		
8	*Agrée* District Hospital	Gitarama/Kabgayi	IMPACT, QAP	✓		✓
9	Public Health Center	Gitarama/Kabgayi	IntraHealth		✓	
10	*Agrée* Health Center	Kibuye/Kibuye	IntraHealth, VCTI	✓	✓	
11	*Agrée* District Hospital	KigaliNgali/Ruli	IMPACT, QAP		✓	✓
12	*Agrée* Health Center	Kigali/Muhima	UNICEF, MAP, QAP	✓	✓	✓
13	Public Health Center	Kigali/Muhima	EGPAF, VCTI	✓	✓	
14	Private Referral Hosp.	Kigali			✓	✓
15	Public Health Center	Kigali/Muhima	EGPAF		✓	
16	Public Referral Hospital	Kigali/Muhima	ESTHER, QAP, MAP, GFATM	✓		✓
17	Public HIV/AIDS	Kigali/Muhima	CDC, ESTHER	✓		✓
18	Public Health Center	Ruhengeri/Ruhengeri	VCTI	✓		
19	Public Health Center	Umutara/Nyagatare	WHO, VCTI	✓	✓	
20	Public District Hospital	Umutara/Nyagatare	WHO, MAP, QAP, VCTI	✓	✓	
ALL				**15**	**12**	**8**

Data on tasks carried out during service delivery, including the time taken to complete each task, were collected through observations of client-provider interactions, where client consent had been obtained. Observations were conducted to ensure objective information about what was done and how long it took to do. A total of 283 provider-client sessions were observed.

Information concerning staff motivation was collected through interviews with individual service providers in order to gain an understanding of why they are or are not motivated to provide HIV/AIDS services and the key factors that satisfy or dissatisfy them about their work. A total of 93 service-provider interviews were conducted to explore the factors that motivate or dissatisfy them about their HIV/AIDS work.

Table 3: Data Collected and Methods of Data Collection

Category of Information	Specific Data Collected	Method of Collection
District-level information	• Supervisory staff present • Staff training in HIV/AIDS supervision • Salaries of district staff • Supervision and coordination of HIV/AIDS services • Employment policies and practices	District health management team interviews
Service site information	• HIV/AIDS services provided • Date of initiation of HIV/AIDS services • Linkages to services at other locations • Number/type of service providers • Hours of work devoted to HIV/AIDS services • Staff/volunteer losses in last 12 months	Site manager interviews
Service statistics	• Mean number of clients per month/service • Number of women attending antenatal clinic • Number of clients given pre-test counseling • Number of clients tested for HIV • Number of clients given post-test counseling • Number of HIV-positive pregnant women given Nevirapine • Number of ARV clients returning for regular review	Record reviews
Task analysis	• Specific tasks carried out by service providers • Cadre of service provider • Gender of the service provider • Time taken to complete the task	Service provider-client observations*
HIV/AIDS training	• Content of training provided to service providers • Duration of training • Qualifications of trainers • Cost of training • Numbers and types of staff trained	Interviews with training site coordinators/ managers and support agencies
Staff motivation	• Service provider salaries • Other incentives provided to service providers • Sources of technical support • Factors that motivate service providers • Factors that dissatisfy service providers	Provider interviews

* Agreement was sought for the observation of each client's service provision. In each case, the purpose and conduct of the study were explained to the client, and each was asked if he/she was willing to have the interaction observed, with assurances that the documented results would remain anonymous and no record of his/her name would be made public. Each client had the right to decline participation, and service providers had to witness client consent and initial data collection forms.

III. HIV/AIDS PERSONNEL MANAGEMENT

The management of HIV/AIDS personnel and the services they provide contribute to staff morale, the quality of services, and the sustainability of service provision over the coming years. The study team was therefore interested in learning more about the managers and supervisors who support HIV/AIDS service providers. The primary focus of the study was on district health management team members, but some data were also collected from TRAC in order to assess some central level management staffing.

A. Management Structure

1. Central Level

At the central level, HIV/AIDS services have been coordinated primarily by TRAC. TRAC is responsible for improving care for PLWHA, decentralizing VCT, PMTCT, and sexually transmitted infection (STI) services, and maintaining epidemiological surveillance and research. It also oversees the Rwandan Center for AIDS Information (CRIS). TRAC's involvement in service provision has created some confusion because the Directorate of Health Care (DSS) is responsible for the delivery, supervision, and quality of all other health services. The management of HIV/AIDS service statistics is also being done by TRAC, leaving the Directorate of Health Planning, which manages the national health management information system (HMIS), confused about its role in managing HIV/AIDS information in addition to other health services data.

Although TRAC is a department of the Ministry of Health, almost all (32 of 40) TRAC's technical staff is paid with donor funds. These staff used to be employed directly by donor or technical support agencies, but TRAC recently changed this practice. Currently, almost all TRAC personnel are employed directly by TRAC, although their salaries are still financed by donors through contracts with TRAC. Salaries of staff paid through donor support are substantially higher than the government pay scale. The need to attract and maintain highly qualified personnel willing to work the long hours required to manage HIV/AIDS services scale-up motivated the decision to provide salaries above the government pay scale. However, both the government and donors are concerned about the sustainability of TRAC staffing. Plans have not yet been developed to continue support of TRAC staff should donor funding decline.

2. Provincial and District Level

The Rwandan Government is decentralizing its health system (MINISANTE 2003). This process includes passing administrative management of health services to the provincial and district levels. Provincial Health Offices have a Medical Director. Eventually all provinces will also have Coordination Divisions in each of the Provincial Health Offices, which will be staffed by a medical doctor, a pharmacy manager, and two public health specialists. Currently, due to the lack of qualified personnel in the country, few Provincial Health Offices are fully staffed.

Employment issues such as recruitment and transfer are managed by the provincial office, in collaboration with the Ministry of Health and the Ministry of Public Service, Skills Development and Labor. In most cases, provincial offices also store vehicles, which districts borrow for outreach and other health activities. Health districts[1] are the operational units responsible for carrying out national strategy in health planning, activity execution, and management.

3. District Staff

Health districts have health management teams responsible for planning and supervising healthcare delivery in the district. The study team spoke with district health management team members in 11 different health districts. The staff that makes up district health management teams includes the District Director (Medi-district), district supervisors, district pharmacy managers, and district administrators. The number of technical support staff in the districts interviewed ranged from four to eight and averaged five. Other staff present in the district, but not included as "technical support staff," includes accountants, secretaries, chauffeurs, and cleaners.

[1] Health districts do not necessarily correspond to administrative districts and sometimes cover two or more administrative districts. When this occurs, the administrative districts must belong to the same province.

Currently, district heath management teams occupy an office independent of the district hospital, and the district health management team staff is also distinct from district hospital staff. However, this system is being revised as the Ministry of Health is in the process of trying to reduce the number of health managers and administrators as part of national health reforms. At the time data for this study were collected, District Directors were playing dual roles of both District Director and District Hospital Director. Other staff were still independent of the district hospital, but it is expected that all district staff will soon been integrated into the district hospitals and will be expected to provide clinical or administrative services at the hospital and fulfill their district responsibilities, including supervision (MINISANTE 2003: 6).

While integrating district staff into district hospitals may reduce costs, how district staff will manage their district and hospital activities is unclear. No guidelines currently exist for how much time staff should spend on district versus hospital responsibilities. Many district activities such as planning, report writing, supervision, and data analysis take time to be done well. Thought should be given to defining clear responsibilities, including time management, for district hospital staff doubling as district health management team staff.

B. Staff Qualifications and Salaries

District staff is usually trained medical personnel (primarily doctors and nurses). There are so few pharmacists in Rwanda that almost all pharmacy managers in District Health Offices are nurses. Sometimes personnel have been trained in management and supervision, but the team found some staff who had never received additional training for their posts. Virtually no district personnel have training in personnel management. They are also paid according to their clinical qualifications and not according to their managerial responsibilities, receiving the same salaries as their clinical counterparts in hospitals and health centers. The only benefit to working in a district position rather than a facility position is that there are sometimes more opportunities to collect per diem for support visits, but even this is not always the case.

C. HIV/AIDS Services Management

District managers and other technical staff expressed confusion over their roles and responsibilities in managing HIV/AIDS services. While districts are responsible for managing drugs and health activities related to almost all health services, HIV/AIDS services continue to be directed from the central level. In the districts interviewed, some district supervisors had been trained to supervise VCT and PMTCT, but none was an experienced HIV/AIDS counselor. HIV/AIDS service statistics were being routed to TRAC through the districts but were not integrated into the forms of the national health information (*Système d'Information Sanitaire*). Districts were not tracking the information themselves, but merely passing on the forms. Nor had district staff received any training for how to monitor and interpret HIV/AIDS statistics and make data-driven action plans.

None of the districts interviewed was receiving funds from donor agencies for managing HIV/AIDS services, although it was anticipated that VCTI would soon begin signing contracts with heath districts for this purpose. Several agencies have entered into contracts directly with health facilities for the provision of HIV/AIDS services. These contracts provide valuable resources: they pay for equipment and materials, they sometimes provide salaries for additional staff, and they support staff training and skills development. Yet, without the integration of HIV/AIDS services into routine district activities and proper support for the management of HIV/AIDS activities, staff at these health centers is not receiving proper supervision and support. Several districts noted that although their staff was trained to supervise HIV/AIDS activities, transportation to conduct supervision was a serious problem as they were unable to get vehicles from the province when needed.

District health management team members voiced a number of concerns about the scale-up of HIV/AIDS activities. Although grateful for financial and technical support offered by donor agencies, many districts felt that they were not included in the planning of HIV/AIDS activities in the districts. The different requirements and demands of various donor agencies posed other problems for district staff, who found completing the different documentation and reporting requirements of multiple agencies confusing. Perhaps most importantly, districts felt that they were being left out of the management of HIV/AIDS services and were concerned about the sustainability and quality of services.

IV. VCT AND PMTCT SERVICES

A. Models of Service Delivery

Voluntary counseling and testing includes HIV/AIDS pre-test counseling, testing, and post-test counseling provided to general clients. Prevention of mother-to-child transmission includes the same steps as VCT but is provided to pregnant women during antenatal care (ANC) visits and includes additional information about reproductive health, infant feeding options, and prophylactic treatment to prevent transmission of HIV to the infant. It should be noted, however, that many PMTCT service sites encourage husbands of PMTCT clients to come for counseling and testing and that these male clients are also included in PMTCT record books as PMTCT clients, rather than as VCT clients. All VCT and PMTCT sites in Rwanda are using rapid HIV tests and provide same-day results. Following TRAC guidelines, all sites provide group IEC sessions preceding individual pre-test counseling.

B. Charges for VCT/PMTCT Services

All health facilities included in the study charge clients for VCT services. Charges for VCT services range from 100 to 500 *Francs Rwandais* (FR) (US$0.18-0.87),[2] with an average of FR320 (US$0.56). The NGO site charged the least for services, with VCT counseling costing only FR100. On average, public and *agrée* health facilities charged between FR333 and 350. Managers of several health facilities noted that they used the money to pay for the reproduction of record forms and purchase of record books and other materials. Unlike VCT services, PMTCT is free in Rwanda. Even the private hospital offers PMTCT services free of charge when clients pay for routine ANC services.

Table 4 shows the difference in prices for VCT services at the different service sites. The data suggest that sites that charge more for services counsel a greater number of clients, but it should be kept in mind that all sites that charged FR500 were also located in urban or peri-urban areas as opposed to sites that charged FR200 or 300, which were more likely to be situated in rural areas.

C. Average Numbers of Clients Served

Tables 5 and 6 provide details on the number of clients given pre-test counseling at each of the VCT and PMTCT sites visited. The data are analyzed by day of service. PMTCT services are generally offered two days per week at sites throughout Rwanda. VCT, on the other hand, may be offered two days per week or five days per week, depending on the site.

[2] All dollar amounts in this report refer to US dollars.

Table 4: Charges for VCT Services

Site Number	Site Type	VCT	
		Number of Clients in the Last Year	Service Price (in FR)
6	NGO VCT Clinic	3254	100
4	*Agrée* Health Center	4384	200
10	*Agrée* Health Center	607	200
13	Public Health Center	1421	200
3	*Agrée* Health Center	1754	300
8	*Agrée* District Hospital	4479	300
7	Public Health Center	1053	300
19	Public Health Center	349	300
1	Public Health Center	413	300
5	*Agrée* District Hospital	2485	500
12	*Agrée* Health Center	2148	500
17	Public HIV/AIDS	8925	500
18	Public Health Center	4188	500
20	Public District Hospital	4960	500
16	Public Referral Hospital	348	No data

The data show a wide range in the average number of clients served per day of service. Overall, however, *agrée* sites see a larger number of clients than public sites. For VCT, *agrée* sites served an average of 21.2 clients per service day while public sites served an average of 16.0. For PMTCT, *agrée* sites served an average of 14.9 clients per service day and public sites an average of 11.3. *Agrée* sites have a reputation for better management and service delivery and are often preferred by clients; however, as is demonstrated in Table 7, the data suggest that more efficient service provision and not just greater client loads account for this difference.

Table 5: Average Number of VCT Clients Served per Day of Service

Site Number	Site Type	VCT		
		Number of Clients in Last Year	Average Number of Clients per Day of Service*	Days per Week Service Is Offered
3	*Agrée* Health Center	1754	17.0	2
4	*Agrée* Health Center	4384	42.0	2
5	*Agrée* District Hospital	2485	24.0	2
8	*Agrée* District Hospital	4479	17.8	5
10	*Agrée* Health Center	607	5.8	2
12	*Agrée* Health Center	2148	20.6	2
Average for *Agrée* Sites		**2643**	**21.2**	
7	Public Health Center	1053	10.0	2
13	Public Health Center	1421	13.7	2
16	Public Referral Hospital	348	1.4	5
17	Public HIV/AIDS	8925	36.0	5
18	Public Health Center	4188	40.0	2
19	Public Health Center	349	3.4	2
20	Public District Hospital	4960	20.0	5
1	Public Health Center	413	4.0	2
Average for Public Sites		**2707**	**16.0**	
6	NGO VCT Clinic	3254	13.0	5
NGO VCT Clinic		**3254**	**13.0**	

* A day of service is considered one full day (eight hours) in which VCT services are offered. For most integrated sites, VCT is offered two days per week. The average number of clients per day was thus calculated by dividing the number of clients seen in the last year by 104 (52 weeks X 2 days/week). For the two vertical sites (17 and 6), which

provide VCT services daily, and the two hospital sites with daily VCT clinics, days of operation were calculated as 251 days/year (365 days/year – 104 weekend days – 10 national holidays = 251 operational days per year).

D. Workload of VCT and PMTCT Service Providers

Tables 7 and 8 provide an analysis of the VCT and PMTCT workload per staff member at each VCT site. The number of service providers includes both "qualified staff" and auxiliary staff or lay counselors, but excludes laboratory staff. The numbers of service delivery staff are presented as full-time equivalents (FTE), which are derived by dividing the actual hours that staff devoted to HIV/AIDS service delivery per week by the average number of working hours/week for clinical staff in the public sector (40 hours, according to the national personnel standards).

Tables 7 and 9 show that *agrée* sites serve a greater number of clients per FTE service provider than do public sites. This suggests that a higher client load is not necessarily a function of a greater number of staff. With comparable client loads, each FTE service provider at site 4, an *agrée* site, was able to see 192 clients per month whereas each FTE service provider at site 20, a public site, was only able to serve 125 clients per month, suggesting more efficient use of staff or service organization at the *agrée* facility.

Table 6: Average Number of PMTCT Clients Served per Day of Service

Site Number	Site Type	PMTCT		
		Number of Clients in Last Year	**Average Number of Clients per Day of Service**	**Number of Days per Week Service Is Offered**
3	*Agrée* Health Center	3012	29.0	2
4	*Agrée* Health Center	1722	16.6	2
5	*Agrée* District Hospital	1057	10.0	2
10	*Agrée* Health Center	1363	13.0	2
11	*Agrée* District Hospital	917	8.8	2
12	*Agrée* Health Center	1269	12.2	2
Average for *Agrée* Sites			**14.9**	
2	Public Referral Hospital	776	7.5	2
7	Public Health Center	2126	20.4	2
9	Public Health Center	885	8.5	2
13	Public Health Center	1753	17.0	2
15	Public Health Center	1753	17.0	2
19	Public Health Center	109	1.0	2
20	Public District Hospital	798	7.7	2
Average for Public Sites			**11.3**	
14	Private Referral Hospital	325	3.0	2
Private Referral Hospital			**3.0**	

Table 7: VCT Clients Given Pre-test Counseling by Site Type

Site Number	Site Type	VCT		
		Average Number of VCT Clients per Month	Number of FTE Service Providers	Clients per FTE Service Provider per Month
3	*Agrée* Health Center	146	2.8	52
4	*Agrée* Health Center	365	1.9	192
5	*Agrée* District Hospital	207	1.9	109
8	*Agrée* District Hospital	373	4.5	83
10	*Agrée* Health Center	51	1.0	51
12	*Agrée* Health Center	179	6.7	27
Average for *Agrée* Sites				**85.7**
1	Public Health Center	35	0.4	35
7	Public Health Center	88	2.2	40
13	Public Health Center	118	3.2	37
16	Public Referral Hospital	29	1.0	29
17	Public HIV/AIDS	744	10.0	74
18	Public Health Center	350	2.9	121
19	Public Health Center	29	0.5	29
20	Public District Hospital	413	3.3	125
Average for Public Sites				**61.3**
6	NGO VCT Clinic	271	16.0	17
NGO VCT Clinic				**17**

Table 8: VCT Clients Given Pre-test Counseling by Delivery Model

Site Number	Site Type	VCT		
		Average Number of VCT Clients per Month	Number of FTE Service Providers	Clients per FTE Service Provider per Month
3	*Agrée* Health Center	146	2.8	52
4	*Agrée* Health Center	365	1.9	192
5	*Agrée* District Hospital	207	1.9	109
10	*Agrée* Health Center	51	1.0	51
12	*Agrée* Health Center	179	6.7	27
1	Public Health Center	35*	0.4	35
7	Public Health Center	88	2.2	40
13	Public Health Center	118	3.2	37
16	Public Referral Hospital	29	1.0	29
18	Public Health Center	350	2.9	121
19	Public Health Center	29*	0.5	29
20	Public District Hospital	413	3.3	125
Average for Integrated Service Delivery Sites				**70.6**
8	*Agrée* District Hospital**	373	4.5	83
17	Public HIV/AIDS	744	10	74
6	NGO VCT Clinic	271	16	17
Average for Vertical Service Delivery Sites				**58**

* Sites 1 and 19 saw a total average of 35 and 39 clients, respectively, per month. The number of "Clients per FTE Service Provider per Month" in the last column, thus represents the total number actually seen and does not assume the *potential* clients per FTE for these sites, which would come to 88 and 58, respectively.

** Although this site is an integrated service delivery site, its VCT clinic is distinct from other services, operates on a daily basis, and has dedicated service delivery staff. It is thus comparable to the vertical service delivery model.

Table 9: PMTCT Clients Given Pre-test Counseling by Site Type

Site Number	Site Type	PMTCT			
		Average Number of ANC First Visit Clients per Month	**Average Number of PMTCT Clients per Month**	**Number of FTE PMTCT Service Providers**	**PMTCT Clients per FTE Service Provider per Month**
3	*Agrée* Health Center	254	251	2.4	105
4	*Agrée* Health Center	145	144	1.8	80
5	*Agrée* District Hospital	96	88	1.9	46
10	*Agrée* Health Center	114	114	1.0	114
11	*Agrée* District Hospital	80	76	5.0	15
12	*Agrée* Health Center	105	106	8.6	12
Average for *Agrée* Sites					**62**
2	Public Referral Hospital	71	65	5.6	12
7	Public Health Center	177	177	2.2	80
9	Public Health Center	74	74*	0.4	74
13	Public Health Center	147	146	3.2	46
15	Public Health Center	146	146	4.2	35
18	Public Health Center	No data	No data	2.9	No data
19	Public Health Center	88	67	0.5	67
20	Public District Hospital	69	67	1.1	61
Average for Public Sites					**53.6**
14	Private Referral Hospital	125	27	1.0	27
Private Hospital					**27**

* Site 9 saw a total average of 74 clients per month. The number of "Clients per FTE Service Provider per Month" in the last column, thus represents the total number actually seen and does not assume the *potential* clients per FTE for these sites, which would come to 185.

E. Effectiveness of VCT and PMTCT Services

The number of clients who are tested and receive their test results (i.e., are given post-test counseling) is a measure of the effectiveness of the VCT services. Such a measure is dependant on the quality of data available at service sites. The data collection team found that, while all VCT and PMTCT sites kept record books, there were several record-keeping procedures that raise questions about the accuracy of these results. For example, in several sites, clients are entered into register books only after they receive post-test counseling; clients who drop out of the process are thus left out of registers. In other sites, record books contained gaps or numbers tested as listed in the VCT and PMTCT clinic record book did not correspond to the laboratory registers of tests. The team found that very few service providers have ever received supportive supervision in record-keeping.

Despite irregularities in record-keeping, providers insist that almost all clients who come for VCT and PMTCT services follow the counseling and testing process through to the end, and observations by the study team confirm that clients are willing to wait very long hours to receive results. The results of service effectiveness should be interpreted with an understanding that while reasonable, they are not exact.

Table 10 indicates that for all participating sites, a high percentage of clients who receive pre-test counseling is tested and receives post-test counseling. Committed service providers are largely responsible for this remarkable throughput of clients. The team observed staff members going to great lengths to attend to clients, including skipping lunch and staying late, sometimes by several hours, to complete post-test counseling.

Table 10: VCT Service Completion Rate by Site

Site Number	Site Type	Percentage of Pre-test Counseled Who Were Also Post-test Counseled
1	Public Health Center	94%
3	*Agrée* Health Center	98%
4	*Agrée* Health Center	97%
5	*Agrée* District Hospital	99%
6	NGO VCT Clinic	99%
7	Public Health Center	100%
8	*Agrée* District Hospital	100%
10	*Agrée* Health Center	90%
12	*Agrée* Health Center	100%
13	Public Health Center	100%
16	Public Referral Hospital	No data
17	Public HIV/AIDS	100%
18	Public Health Center	No data
19	Public Health Center	98%
20	Public District Hospital	100%

As seen in Table 11, uptake of PMTCT services was slightly lower than that of VCT, a difference likely explained by several factors. Several sites noted that initially many pregnant women were unwilling to accept counseling and testing. After sites number 10 and 19 instituted mandatory counseling with optional testing to address the issue, the number of women accepting testing increased. A chronic shortage of test kits, which the manager attributed to the supporting agency, is ostensibly the reason that only 10% of women presenting for ANC services received post-test counseling at site number 19, a public health center. The availability of PMTCT services only on demand and with only one PMTCT service provider may explain why only 12% of ANC clients received PMTCT counseling and testing at site number 14, a private hospital. At most sites, a relatively high number of HIV-positive pregnant women (74% on average) also received Nevirapine (Table 12). This attendance rate is all the more impressive since at many sites the team observed that HIV-positive pregnant women were not necessarily given Nevirapine on their initial visit but were asked to return in their third trimester and, if possible, again in the last month of pregnancy. Only 69% of pregnant women normally attend for follow-up ANC (DHS 2000).

Table 11: PMTCT Service Completion Rate by Site (Counseling and Testing)

Site Number	Site Type	Percentage of Women Tested Who Were also Post-test Counseled	Percentage of All ANC Female Clients Who Were Post-test Counseled
2	Public Referral Hospital	99%	91%
3	*Agrée* Health Center	99%	98%
4	*Agrée* Health Center	96%	95%
5	*Agrée* District Hospital	96%	89%
7	Public Health Center	100%	99%
9	Public Health Center	No data	No data
10	*Agrée* Health Center	93%	92%
11	*Agrée* Health Center	99%	94%
12	*Agrée* Health Center	99%	89%
13	Public Health Center	97%	98%
14	Private Referral Hospital	100%	12%
15	Public Health Center	100%	100%
19	Public Health Center	74%	10%
20	Public District Hospital	79%	96%

The percentage of infants of HIV-positive mothers given Nevirapine who are treated within 72 hours of delivery was more difficult to determine. Several health centers provide ANC services but do not have maternity wards. Women who attend these health facilities are referred to other facilities or the district hospital for delivery. With no system currently in place for sharing information among facilities, health centers cannot follow the women under their care and learn if both they and their infants receive Nevirapine.

An additional barrier to accessing treatment is that many women can only reach health facilities on foot. A large percentage of women (74%) deliver at home, rather than at health facilities (DHS 2000). While HIV-positive women who deliver at home may take their Nevirapine, they may be less likely to come into the health facility within 72 hours after delivery.

Table 12: PMTCT Service Completion Rate by Site (Treatment)

Site	Site Type	Percentage of Women Who Test Positive That Are Receiving Treatment	Percentage of Infants of Mothers Given Nevirapine Who Are Treated within 72 Hours of Delivery
2	Public Referral Hospital	97%	No data*
3	*Agrée* Health Center	92%	34%
4	*Agrée* Health Center	82%	No data
5	*Agrée* District Hospital	62%	61%
7	Public Health Center	85%	53%
9	Public Health Center	86%	43%
10	*Agrée* Health Center	36%	90%
11	*Agrée* Health Center	93%	89%
12	*Agrée* Health Center	77%	No data
13	Public Health Center	94%	No data
14	Private Referral Hospital	46%	48%
15	Public Health Center	83%	73%
19	Public Health Center	67% (Estimated; insufficient data)	(Insufficient data)
20	Public District Hospital	28%	62%

* Data on infants treated at this site include all women that come to the maternity, including women counseled and tested at other sites. It is therefore impossible to determine throughput rates.

F. Categories of VCT and PMTCT Service Providers

Consistent with the staffing make-up of the Rwandan health system, the majority of VCT and PMTCT service providers are nurses (50%). Social workers are the second largest category of VCT and PMTCT service providers composing 15% of the workforce. Auxiliary staff makes up a relatively small proportion of the VCT/PMTCT workforce at only 7%, a sum which is incongruous with their representation in the health workforce generally (23%). The low representation of auxiliary staff members was due principally to the prevailing belief in the public sector that, as unqualified medical staff, auxiliary staff is not qualified to provide VCT and PMTCT services, even with appropriate training. A number of site managers and district supervisors expressed concern about the involvement of auxiliary staff in HIV/AIDS service provision. The only site in which non-health professionals were represented in large numbers as VCT counselors was site number 6, a vertical NGO service site dedicated to VCT service delivery. At this site, lay counselors have been trained to offer VCT services.

Lab technicians were represented at all service sites. In many cases, staff classified as “laboratory technicians” were actually nurses or auxiliary personnel who have received training in laboratory procedures.

Table 13: Number of VCT and PMTCT FTE Service Providers by Cadre and Site

Site	Doctors	Medical Assistants	Nurses	Social Workers	Nutritionists	Aides and Auxiliary Staff	Other Medical Personnel	Lay Persons and Volunteers	Lab Technicians	Total	Service
1			0.3						0.4	0.7	VCT
2	0.6		5.0						1.0	6.6	PMTCT
3			4.2	1.4					2.0	7.6	VCT/PMTCT
4			1.9	1.9					1.9	5.7	VCT/PMTCT
5			0.9	1.0					0.9	2.8	VCT/PMTCT
6			1.0	2.0			1.0	12.0	1.0	17.0	VCT
7			3.6			0.8			0.2	4.5	VCT/PMTCT
8			4.0						0.1	4.1	VCT
9			0.5	0.1					0.2	0.8	PMTCT
10			0.7	0.2	0.2	1.0			0.3	2.3	VCT/PMTCT
11			2.5	2.5						5.0	PMTCT
12			8.6	1.9		2.9			0.7	14.2	VCT/PMTCT
13			4.0	0.8		1.6			1.8	8.2	VCT/PMTCT
14			1.0						0.2	1.2	PMTCT
15	0.9		1.8	0.5	1.0				1.8	5.9	PMTCT
16			0.7	0.3					0	1.0	VCT
17			7.0	3.0					0	10.0	VCT
18			3.8	1.0		1			1.9	7.7	VCT/PMTCT
19			0.5			0.5			0.2	1.2	VCT/PMTCT
20			3.8	0.3	0.4				0.6	4.3	VCT/PMTCT
Total	**1.5**	**0**	**55.9**	**16.8**	**1.6**	**7.8**	**1.0**	**12.0**	**14.9**	**111.0**	
%	**1%**	**0%**	**51%**	**15%**	**1%**	**7%**	**1%**	**11%**	**13%**	**100%**	

Table 13 shows the number of FTE staff providing HIV/AIDS services at each of the PMTCT and VCT study sites. FTE estimates combine VCT and PMTCT providers in those sites where both types of services are offered. Providers receive training for VCT and PMTCT simultaneously, and observations at service sites found that most HIV/AIDS service providers provided both VCT and PMTCT services.

G. Compliance with Standards for VCT and PMTCT Service Provision

A standard set of tasks required for good quality counseling was developed using TRAC guidelines. The proportion of these prescribed tasks that the counselor completed was calculated for each site based on the observations conducted for pre-test counseling, post-test counseling for clients who test HIV-negative, and post-test counseling for clients who test HIV-positive. A measure of service delivery according to standards was thus developed. The resulting service delivery standards are measures of how many of the prescribed tasks were carried out and not of how well these tasks were done.

The study divided service provision into three levels of performance. Observed counseling that met 0-39% of the standard was classified as *unacceptable;* counseling that scored 40-69% was classified as *needing improvement;* and that which scored 70% or higher was classified as *acceptable*. The levels of performance achieved in counseling by each site for VCT and PMTCT are shown in Tables 14 and 15.

Table 14 demonstrates that only three of the 14 sites in which VCT services were observed achieved an *acceptable* level (70% or higher) for VCT service provision. Six sites performed at a level between 60% and 69%, and five sites showed achievement rates below 60%.

Overall, performance in pre-test counseling was poorest. This may have to do with the fact that providers put a lot of emphasis on IEC and do not spend time to assess if the client has understood what was presented in IEC or reiterate information covered in the IEC session. Providers performed best in post-test counseling for HIV-positive clients. The average score for the 10 sites in which post-test counseling of HIV-positive women was observed was 70%, compared to 62% for pre-test counseling and 61% for post-test counseling of HIV-negative clients. Providers are clearly concentrating their efforts on serving HIV-positive clients but may be missing opportunities to reinforce prevention.

Table 14: VCT Counseling Performance According to Standards by Site

Site	Site Type	Pre-test Counseling	Post-test Counseling HIV-negative	Post-test Counseling HIV-positive	Overall Standard Achieved
1	Public Health Center	39%	38%	No data	39%
3	*Agrée* Health Center	56%	51%	63%	57%
4	*Agrée* Health Center	55%	47%	88%	63%
5	*Agrée* District Hospital	68%	68%	69%	68%
6	NGO VCT Clinic	53%	88%	64%	68%
7	Public Health Center	87%	92%	100%	93%
8	*Agrée* District Hospital	50%	85%	No data	68%
10	*Agrée* Health Center	78%	64%	90%	77%
12	*Agrée* Health Center	43%	60%	75%	59%
13	Public Health Center	76%	38%	No data	57%
16	Public Referral Hospital	No data	No data	No data	No data
17	Public HIV/AIDS	69%	61%	62%	64%
18	Public Health Center	65%	59%	44%	56%
19	Public Health Center	70%	70%	No data	70%
20	Public District Hospital	59%	36%	45%	47%
Total Average		**62%**	**61%**	**70%**	**64%**

Service provider performance for PMTCT services was lower on average than that of VCT. Only two service sites achieved an acceptable standard of performance. The average overall standard achieved across the 12 sites for which data were collected was 57%. Pre-test service provision scored an average of

50%, post-test counseling for HIV-negative clients 64%, and post-test counseling for HIV-positive women 62%.

Table 15: PMTCT Counseling Performance According to Standards by Site

Site	Site Type	Pre-test Counseling	Post-test Counseling HIV-negative	Post-test Counseling HIV-positive	Overall Standard Achieved
2	Public Referral Hospital	24%	25%	No data	25%
3	*Agrée* Health Center	No data	58%	50%	54%
4	*Agrée* Health Center	54%	75%	60%	63%
5	*Agrée* Disrict Hospital	No data	67%	60%	64%
7	Public Health Center	No data	No data	No data	No data
9	Public Health Center	67%	No data	No data	67%
10	*Agrée* Health Center	64%	91%	No data	78%
11	*Agrée* Health Center	41%	58%	No data	50%
12	*Agrée* Health Center	33%	No data	No data	33%
13	Public Health Center	87%	94%	78%	86%
14	Private Referral Hospital	63%	71%	No data	67%
15	Public Health Center	27%	34%	60%	40%
19	Public Health Center	No data	No data	No data	No data
20	Public District Hospital	40%	64%	61%	55%
Total Average		**50%**	**64%**	**62%**	**57%**

In the Rwandan civil service, staff level is defined both by training/education and by experience. A0 staff is supposed to be the most highly trained and experienced staff; very few cadres besides physicians can reach the A0 level. A3 is the lowest level and represents staff that has the lowest degree of education and experience. Many A3 workers do not have a secondary school education.

Tables 16, 17, 18, and 19 examine different performance levels achieved by different cadres and by different levels of service providers; they do not include the performance for VCT and PMTCT IEC sessions. Auxiliary staff demonstrated the highest level of performance (76%) for VCT service provision, followed by social workers and then nurses. Similarly, the A3 category of worker achieved the highest standard of performance at 68%, followed by A1 workers at 67% and A2 workers at 61%.

Table 16: VCT Counseling Performance According to Standards by Cadre

Cadre	Pre-test Counseling for Pregnant Women	Post-test Counseling for HIV-negative Women	Post-test Counseling for HIV-positive Women	Mean for All Stages of Counseling
Doctor	No data	No data	No data	No data
Nurse	63%	60%	60%	61%
Social Worker	57%	59%	69%	62%
Auxiliary Staff*	73%	79%	No data	76%
Other	54%	54%	No data	54%
Mean: All Cadres	**62%**	**63%**	**62%**	**62%**

* Auxiliary staff refers to “unqualified” health personnel who are supposed to provide non-clinical assistance to health providers. Many, however, are informally trained by qualified staff to do particular clinical tasks: stitch wounds, counsel clients, and give medications. The government is seeking to phase out auxiliary staff, but many rural health centers continue to depend on them as care providers. They currently make up 23% of the health workforce (see Furth et al. 2005).

Table 17: VCT Counseling Performance According to Standards by Staff Level

Cadre	Pre-test Counseling for Pregnant Women	Post-test Counseling for HIV-negative Women	Post-test Counseling for HIV-positive Women	Mean: All Stages of Counseling
A0 (highest)	No data	No data	No data	No data
A1	77%	57%	No data	67%
A2	60%	62%	62%	61%
A3 (lowest)	70%	66%	No data	68%
Other	No data	No data	No data	No data
Mean: All Levels	**62%**	**63%**	**62%**	**62%**

Similarly, in PMTCT counseling, auxiliary staff members demonstrated the highest level of performance at 80%, followed by doctors at 63%, social workers at 58%, and nurses at 56%. A3 workers achieved the highest level of performance at 86%, followed by workers in the "other" category (i.e., workers that are not on the national staffing scale, such as auxiliary staff) at 80% and A1 workers at 65%.

IEC sessions, which are conducted by various providers, were also observed, though results are not disaggregated by level or cadre. The average performance observed for VCT IEC sessions was 68%, while the average performance observed in PMTCT IEC sessions was 74%.

Table 18: PMTCT Counseling Performance According to Standards by Cadre

Cadre	Pre-test Counseling for Pregnant Women	Post-test Counseling for HIV-negative Women	Post-test Counseling for HIV-positive Women	Mean: All Stages of Counseling
Doctor	60%	66%	no data	63%
Nurse	51%	56%	61%	56%
Social Worker	51%	67%	55%	58%
Auxiliary Staff	76%	94%	70%	80%
Other	40%	no data	72%	56%
Mean: All Cadres	**52%**	**64%**	**62%**	**59%**

Table 19: PMTCT Counseling Performance According to Standards by Staff Level

Cadre	Pre-test Counseling for Pregnant Women	Post-test Counseling for HIV-negative Women	Post-test Counseling for HIV-positive Women	Mean: All Stages of Counseling
A0	No data	No data	No data	No data
A1	46%	66%	84%	65%
A2	43%	58%	49%	50%
A3	80%	92%	85%	86%
Other	76%	94%	70%	80%
Mean: All Levels	**52%**	**64%**	**62%**	**59%**

The results for both VCT and PMTCT are contrary to what one would expect. The achievement of auxiliary staff and A3 workers demonstrates that lower categories of staff, including "un-qualified" staff, are capable of achieving high standards of service provision in VCT and PMTCT. But the data may also point to the effect of other organizational factors, such as staff usage, on provider performance.

Categories of workers that are in high demand, such as A2 nurses, tend to have less time and may compromise performance in order to accomplish tasks. The study team observed several instances in which staff organization and allocation placed providers in difficult situations, for instance, requiring that they counsel large numbers of clients, respond to continual interruptions and questions from other

providers, and provide VCT/PMTCT service while addressing other client needs as well. Less qualified workers have a restricted number of tasks they are allowed to perform and thus have far fewer distractions and more time to provide VCT and PMTCT services.

The moderate level of performance achieved in VCT and PMTCT is further evident from the data on tasks frequently omitted from VCT and PMTCT (see Table 20). Complete tables of tasks omitted for each stage of VCT counseling are in Appendix 1. Tasks omitted from VCT and PMTCT counseling sessions are presented in order of those most often omitted to those least often omitted.

For VCT, tasks most often omitted from service provision are those related to referral services (Table 20). The availability of referral services, for example, was omitted in 71% of IEC sessions. Identification of the need for referral was omitted in 88% of pre-test counseling sessions and in 62% of post-test counseling sessions for HIV-positive clients. Other matters that were commonly omitted from VCT counseling included: discussion of the window period,[3] which was omitted 40% of the time in IEC, 69% of the time in pre-test counseling sessions, and in 66% of post-test counseling sessions for HIV-negative clients; discussion of how results, positive or negative, might affect the client, omitted 67% of the time in IEC sessions and 69% of the time in pre-test counseling; and client-centered risk reduction, omitted in 50% of IEC sessions and 46% of pre-test counseling sessions.

In general, clients were given few opportunities to ask questions or discuss client-specific needs or issues. Providers did well, however, in greeting clients and treating them well, obtaining consent for the test, and explaining when and where test results would be available.

[3] The "window period" refers to the time it takes for the body to produce enough antibodies to be detected by an HIV/AIDS test. To ensure an accurate test reading, the Centers for Disease Control and Prevention (CDC) recommends that clients who test HIV-negative within three months of exposure be retested at a time that is greater than three months following exposure. In Rwanda, VCT/PMTCT standards stipulate that clients who test HIV-negative be encouraged to return after three months for a retest.

Table 20: VCT Tasks Frequently Omitted

Task Number	Task	Number of Observations	Number of Times Task Was Omitted	Percentage of Observations in Which Task Was Omitted
VCT group IEC				
11	Presents information about where to go for referral services and tells the client what to do for a consultation	14	10	71%
10	Discusses how a positive or negative result might affect the client	15	10	67%
9	Mentions reasons for referral (STI, OI, and other)	15	9	60%
Individual pre-test counseling				
9	Identifies referral needs (STI, OI, and other)	65	57	88%
11	Gives information about where to go for referral services and tells the client what to do for a consultation	63	52	83%
7	Explains the "window period"	67	46	69%
Post-test counseling for HIV-negative clients				
9	Helps the client identify problems and solutions or resources	41	33	80%
7	Re-explains the window period	41	27	66%
12	Identifies referral needs and gives guidance on what to do for referral	41	23	56%
Post-test counseling for HIV-positive clients				
8	Helps the client to identify problems and solutions or resources	21	15	71%
14	Identifies referral needs and gives guidance on what to do	21	13	62%
9	Discusses partner notification and testing with the client	17	10	59%

Frequent omissions from PMTCT counseling were also observed (Table 21; a complete list of omitted tasks for each stage of PMTCT counseling is included in Appendix 1). Information on reproductive health was frequently omitted from PMTCT counseling sessions: 55% of the time in IEC, 77% in pre-test counseling, and 78% in post-test counseling for HIV-positive clients. In many cases this information related to family planning, which many health facilities and health providers are unwilling to address for religious reasons. The team learned that many sites and providers are now calling ANC clinics PMTCT clinics, although there are ANC service days when pre-test and post-test HIV counseling are not provided. The team did not observe other ANC services, but there is some concern that in an effort to respond to the attention being placed on PMTCT providers may not be covering all reproductive health issues required.

Table 21: PMTCT Tasks Frequently Omitted

Task Number	Task	Total Number of Observa-tions	Number of Times Task Was Omitted	Percentage of Observations in Which Task Was Omitted
PMTCT pre-test IEC				
11	Completes the client record (register book)	3	2	67%
2	Provides general information on pregnancy	11	6	55%
8	Provides information on other reproductive health services including family planning	11	6	55%
PMTCT pre-test counseling				
8	Talks about the importance of choosing a feeding method if HIV-positive	48	39	81%
10	Provides information discusses options for family planning	48	37	77%
12	Explains the window period	49	37	76%
PMTCT post-test counseling for HIV-negative clients				
8	Helps the client to identify problems and solutions or resources	27	25	93%
10	Identifies referral needs and gives guidance on what to do	25	20	80%
11	Summarizes and asks for any further question	28	12	43%
PMTCT post-test counseling for HIV-positive clients				
17	Explains to the mother about Cotrimoxazole prophylaxis for infants from 6 weeks to 12 months of age	9	9	100%*
9	Discusses family planning	9	7	78%
16	Tells mother she must bring her newborn child in for Nevirapine syrup within 72 hours after delivery	9	7	78%

* Although part of the national standard, implementation of Cotrimoxazole for infants had not yet started at the time of the study.

Other issues frequently omitted from PMTCT counseling sessions included the discussion of infant feeding options in pre-test counseling (omitted 81% of the time) and informing HIV-positive women that they need to bring their infants in for Nevirapine prophylaxis within 72 hours of delivery (omitted 78% of the time). Discussion of the window period was omitted 76% of the time in pre-test counseling. It should be noted that observations were only conducted of counseling for new ANC clients. Team members asked counselors why they did not stress the importance of bringing the infant to a facility for Nevirapine. Counselors stated that they covered this topic in later counseling sessions, when the pregnant client returned for follow-up service.

Another quality issue which must be mentioned is that of privacy and confidentiality. Interruptions in counseling sessions by other providers and by clients were constant and universal in VCT and PMTCT counseling. Double use of counseling rooms as stock rooms contributed to the problem, but lack of awareness about privacy and confidentiality on the part of staff was clearly an issue. No counseling rooms in any of the sites visited had “do not disturb” signs on doors.

H. Time Taken for VCT and PMTCT Service Delivery

1. Counseling

The study looked at the mean time required to complete pre-test and post-test counseling sessions at all VCT sites (Table 22) and the average times at sites that met 70% or more of the counseling standards

(Table 23). The findings indicate that the average time for meeting a high standard of VCT counseling is 32 minutes.

Table 22: Average Time Required to Complete Counseling According to VCT Standards by Site

Site	Pre-test Counseling		Post-test Counseling HIV-negative Clients		Post-test Counseling HIV-positive Clients	
	Time Taken (in Minutes)	Percentage Standard Achieved	Time Taken (in Minutes)	Percentage Standard Achieved	Time Taken (in Minutes)	Percentage Standard Achieved
1	8.5	39%	5.1	38%	No data	No data
3	14.7	56%	9.9	51%	12	63%
4	14.3	55%	9.2	47%	17	88%
5	11.8	68%	16	68%	24.5	69%
6	21.8	53%	13.3	88%	23.2	64%
7	13.9	87%	14.1	92%	19.5	100%
8	18.9	50%	9.4	85%	No data	No data
10	13.7	78%	11.4	64%	20	90%
12	9	43%	8.5	60%	15.3	75%
13	15.1	76%	7.3	38%	No data	No data
17	13.6	69%	9.9	61%	14	62%
18	13.9	65%	10.3	59%	10.9	44%
19	20.6	70%	10.9	70%	No data	No data
20	9.6	59%	4.8	36%	8.8	45%

Table 23: Average Time Required to Conduct VCT Counseling at 70% or Higher Performance of Standard by Type of Counseling

Pre-test Counseling	Post-test Counseling HIV-negative Clients	Post-test Counseling HIV-positive Clients	Average Counseling Time*	Group IEC (Average Group Size = 15)
20 minutes	12 minutes	16 minutes	32 minutes	38 minutes

* Based on 100 clients, assumes 8.9% HIV/AIDS prevalence rate, and does not include group counseling time.

Table 24 shows average times for all PMTCT sites, and Table 25 presents the average time for sites that achieved 70% or more of the TRAC standards. There was little difference between counseling time for VCT and PMTCT. PMTCT counseling took, on average, one minute longer than VCT counseling (33 minutes).

Table 24: Average Time Required to Complete Counseling According to PMTCT Standards by Site

Site	Pre-test Counseling		Post-test Counseling of HIV-negative Clients		Post-test Counseling of HIV-positive Clients	
	Time Required for Pre-test Counseling (in Minutes)	Percentage Standard Achieved	Time Required for Post-test Counseling (in Minutes)	Percentage Standard Achieved	Time Required for Post-test Counseling (in Minutes)	Percentage Standard Achieved
2	8.4	24%	3.9	25%	No data	No data
3	No data	No data	11.	58%	11.1	50%
4	16.6	54%	15.2	75%	13.0	60%
5	No data	No data	11.0	67%	21.0	60%
9	20.0	67%	No data	No data	No data	No data
10	16.6	64%	7.9	91%	No data	No data
11	11.5	41%	7.6	58%	No data	No data
12	7.9	33%	No data	No data	No data	No data
13	21.4	87%	9.3	94%	16.1	78%
14	24.8	63%	12.5	71%	No data	No data
15	7.6	27%	7.7	34%	16.0	60%
20	12.6	40%	6.4	64%	9.4	61%

Table 25: Average Time Required to Conduct PMTCT Counseling at 70% or Higher Performance of Standard

Pre-test Counseling	Post-test Counseling of HIV-negative Clients	Post-test Counseling of HIV-positive Clients	Average Counseling Time*	Group IEC Average Group Size = 28
21 minutes	11 minutes	17 minutes	33 minutes	26 minutes

* Based on 100 clients, assumes 8.9% HIV/AIDS prevalence rate and does not include group counseling time.

The TRAC guidelines currently state that a provider should counsel no more than 10 clients per day. Given the time required for PMTCT and VCT counseling, these 10 clients would add up to roughly 5.5 hours of work/day, an amount of time which allows for group counseling, service preparation, waiting, meetings, and other administrative tasks. Yet, at sites where providers were counseling 10 clients per day, the team observed them complete this task with some difficulty. The main factors were that 1) services often started quite late; 2) test samples were collected and sent to the lab after all pre-test counseling was complete, with a lag time of sometimes as much as two hours between pre-test and post-test counseling; 3) staff were often interrupted and asked to address other healthcare needs in the midst of counseling clients; and 4) an insufficient number of counseling rooms left many counselors waiting for space so they could perform their jobs. Organization of services and human resources management are critical to ensure that staff are able to see ten clients per day without great difficulty.

2. HIV Testing

All sites are currently using rapid test kits for HIV testing. Abbott and Capillus (made by Trinity Biotech) are the most common brands in use. Assessing testing task-time presents some challenges. To begin with, per-test time assessment is inaccurate because several tests are usually analyzed simultaneously, and the time for the test to run, usually around 15 minutes, is the same for a single sample or multiple samples. In addition, lab staff often "multi-task" while conducting HIV tests. For example, they may begin filling out records while the tests are still running; they may take care of other lab tasks; or they may begin to set up and process confirmatory tests, even as the first test is still in process. The average time for running 10 to 20 samples simultaneously, including confirmatory testing, was 18 minutes, with an average recording time per sample of 1 minute. For a group of 10 samples analyzed simultaneously, average time for analysis was 18 minutes and for record keeping, 10 minutes, for a total of 28 minutes.

I. Summary of Major Findings for VCT and PMTCT Services

1. Numbers of VCT/PMTCT Clients Served by Public and *Agrée* Sites

Public and *agrée* sites are attracting and serving the same number of clients on average, but *agrée* sites are serving more clients per FTE service provider. For VCT, each FTE service provider sees an average of 86 clients per month at *agrée* sites, whereas each FTE service provider at public sites is attending to an average of only 61 clients per month. There are similar differences between PMTCT service sites, with 62 clients being served per FTE service provider at *agrée* sites and only 54 clients per FTE service provider at public sites. These differences are attributable to better service organization and staff management at *agrée* sites.

2. Service Effectiveness

Service effectiveness was high for VCT and PMTCT clients, although record-keeping procedures raise some question about the accuracy of these data: 98% of clients who came for VCT pre-test counseling and 95% of clients who came for PMCT pre-test counseling received their results and were provided with post-test counseling. The availability of rapid testing technologies and the provision of same-day results contributed to the effectiveness of the service.

3. Service Standards

In general, interruptions, violations of privacy, and lack of confidentiality were observed to be constant and universal in the provision of VCT and PMTCT counseling. Client-centered risk reduction was rarely discussed, and counselors almost never identified referral needs, such as STI care. The neglect of these tasks means that important strategies for encouraging behavior change and promoting HIV prevention are lost.

Performance against TRAC VCT standards was mediocre, and PMTCT performance was quite low: 32% of observed VCT counseling sessions and 77% of PMTCT counseling sessions did not meet an acceptable standard in terms of the tasks carried out. Auxiliary staff and social workers provided the highest level of counseling (76% and 62% respectively for VCT). Nurses demonstrated a relatively low level of counseling, 61% for VCT and 56% for PMTCT. Although the training provided to these different cadres is not different, nurses faced many demands on their time and often seemed to rush through clients in order to attend to other tasks or had to deal with numerous interruptions while counseling. Performance differences between VCT and PMTCT are attributable to the neglect of certain key tasks in providing PMTCT counseling. Perhaps as a result of training for VCT and PMTCT counseling being provided as one unit, PMTCT counselors are neglecting to provide information on family planning, infant feeding, and treatment options for HIV-positive pregnant women, although they are providing most of the information included in VCT counseling.

Like other professionals, counselors need to have their performance reviewed by skilled and experienced practitioners, both during their training and periodically thereafter to ensure that their performance remains acceptable. At present, some trainee counselors have their field practice observed, but practicing counselors are rarely observed by supervisors or mentors.

4. Counselor Qualifications

Currently, about 59% of providers offering VCT and PMTCT counseling at public and *agrée* sites are A2 level nurses. Social workers represent 18% of VCT/PMTCT counselors. Although auxiliary staff represents 14% of staffing trained in VCT and PMTCT counseling, they make up only 8% of staff actually providing VCT/PMTCT counseling services. Their role in HIV/AIDS service provision remains unclear, and funds used to train auxiliary staff may be wasted if their involvement in VCT/PMTCT counseling is not defined.

V. HIV/AIDS CARE AND TREATMENT SERVICES

Rwanda has made remarkable strides in providing ART and OI services. By the end of September 2004, a total of 6,230 clients had started ART. By July 2004, 23 sites were offering HIV/AIDS care and treatment services. This number is expected to increase to 159, including the three national referral hospitals, 39 district hospitals, and 117 health centers.

A. Models of Service Delivery

1. Antiretroviral Therapy

The study team was able to observe client ARV initiation and ARV monitoring. In Rwanda, ART services at most public and *agrée* facilities are provided at a particular location (an ART clinic, or the office of the doctor principally in charge of ART care). Care is provided mainly by physicians and trained A1 (and a few A2) nurses and social workers. In most cases, in which clients come in for scheduled visits, the physician conducts a short interview or examination of the client, writes a prescription or makes requests for laboratory tests, and refers the client to one of the attending nurses or social workers. The nurses and social workers provide counseling on preventive therapy, including nutrition, drug usage, and adherence, and discuss psychosocial issues with the clients.

All ART sites visited dispense only one month's supply of ARV. Clients are required to return each month to meet with the nurse/social worker and receive re-supply. During the re-supply, providers take time to ask questions about adherence and usage. At some sites physicians also are seeing clients during these routine monthly visits to assess any other needs, such as treatment of OI.

2. Opportunistic Infection Care

Services for caring for opportunistic infections proved difficult to assess in part because we were unable to observe OI care, with the exception of a few in-patients in two major hospitals. We found no out-patients presenting with OI aside from those attending ART initiation or monitoring.

In addition, the number of HIV-positive clients presenting for OI care was difficult to determine because few records exist. One health center site where nurses have been trained in OI and STI care through VCTI was able to provide some information about OI clients. Since this was done by looking through 12 months of records with the provider and counting the number of times HIV-positive clients came in for health services, it did not provide accurate information on whether these services were for OI or other health needs.

B. Drug Supply

Only two sites stated they had experienced no issues with drug supply. The most common problem cited was procurement. Site managers noted difficulties both in getting drugs when needed and in obtaining the type or variety of drugs requested. To cope, most sites dispense ARV on a monthly basis. Although practical, the resulting need to see clients every month will require a large investment in staff time as client loads increase.

C. Laboratory Testing

The three referral hospitals—King Faisal Hospital, Central Hospital of Kigali (CHK), and Butare University Hospital—are all equipped and operating as centers for HIV/AIDS testing, care, and treatment. King Faisal hospital, a private facility, has high-tech, automated equipment and trained staff. With a few exceptions, equipment at CHK and Butare Hospital is not automated and takes a larger investment of staff time. TRAC plans to decentralize key laboratory testing to selected district hospitals throughout the nation. These plans include making CD4 count testing, liver function, kidney function, and possibly viral

load testing available in these sites. The team visited one district-level laboratory but found that, although new machines were in place, they were not yet operational. Inconsistent electricity supplies present a constraint to laboratory testing at some district hospitals, although donors are working to ensure more sustainable electrical supplies in selected laboratories.

D. Number of Clients Served

The average number of patients on ARV, the number of ART service providers, and the average number of clients per FTE provider are presented in Table 26. Table 27 then details the type of ART provider by category and by site.

Table 26: Number of Patients Registered for ART per FTE Service Provider

Site Number	Site Type	ART		
		Average Number of Clients on ARV	Number of FTE Service Providers	Clients per FTE Service Provider
2	Public Referral Hospital	348	8.6	40
5	*Agrée* District Hospital	62	1.2	52
8	*Agrée* District Hospital	324	3.0	108
11	Public District Hospital	57	6.7	8.5
12	*Agrée* Health Center	438	5.7	77
14	Private Referral Hospital	No data	4.4	No data
16	Public Referral Hospital	1242	5.8	216
17	Public HIV/AIDS	1459	17.0	86
20	Public District Hospital	68	1.2	57
Average				**80**

Table 27: Number of FTE Service Providers by Cadre and Site for ART Services

Site / Cadre	2	5	8	11	12	14	16	17	20	Total	Percentage
Doctors	2.0	0.6	1.0	1.7	1.9	4.4	1.3	7.0	0.6	20.5	**32%**
Medical Assistants					1.9					1.9	**3%**
Nurses	5.0	0.3		2.5	1.0		3.0	4.0	0.6	16.4	**26%**
Social Workers	1.6	0.3	2.0	2.5	0.9		0.8	1.0		9.1	**14%**
Nutritionists								2.0		2.0	**3%**
Aides and Auxiliary Staff											**0%**
Other Medical Personnel							0.7	3.0		3.8	**6%**
Lay Persons and Volunteers											**0%**
Laboratory Technicians*	3.0	0.9	0.1	2.4	2.9	0.2			0.6	10.1	**16%**
Total	**11.6**	**2.1**	**3.1**	**9.1**	**8.6**	**4.6**	**5.8**	**17**	**1.8**	**63.7**	**100%**

* FTE for laboratory technicians covers all HIV/AIDS services.

E. Effectiveness of ARV Service Provision

ARV data were insufficient to calculate effectiveness. Client information at ARV sites is generally kept in individual client records provided by TRAC but is not summarized in a computer record or register book (with the exception of site number 8). As a result, while most sites providing ARV have a list of the clients in their program, few can note how many clients have failed to return for refills and follow-up care. Because ART client information is kept in individual client records and is not entered into a general register, it was impossible to calculate the number of clients who have returned for six routine monthly

visits and had their CD4 count tests performed. Site number 8, a district hospital, was a notable exception. With support from the IMPACT Project, this site had a computerized database in which all clients are entered. As the client moves through the program, information about the next scheduled tests is entered; and then the client's information is entered when the test results are received. This enables the staff to keep track of which clients are receiving appropriate treatment.

F. Compliance with ART Service Standards by Site

The quality of ART services was generally quite high (Table 28). Only one site performed below the acceptable performance standard of 70%. Yet as Table 29 shows, some key tasks are still being omitted from ART service provision. For example, the comprehensive exam that is supposed to be standard practice for patients initiating ART was omitted 33% of the time, and ensuring patient compliance with an ARV regimen was omitted 29% of the time (a complete list of tasks omitted in ART service provision is included in Appendix 1).

Table 28: ART Service Performance According to Standards by Site

Site	Site Type	ART Initiation	ART Monitoring
2	Public Referral Hospital	78%	87%
5	*Agrée* District Hospital	88%	75%
8	*Agrée* District Hospital	100%	88%
11	Public District Hospital	No data	59%
12	*Agrée* Health Center	79%	No data
14	Private Referral Hospital	No data	80%
16	Public Referral Hospital	100%	97%
17	Public HIV/AIDS	81%	81%

Table 29: ART Tasks Frequently Omitted

Task Number	Task	Total Times Observed	Number of Times Task Was Omitted	Percentage of Times Task Was Omitted
For patients initiating ARV treatment				
2	Conducts a comprehensive exam and checks for current infection	15	5	33%
8	Seeks a way of ensuring patient compliance with the ARV regimen	14	4	29%
9	Asks if patient has any questions and answers any questions posed	16	4	25%
For patients on ARV treatment being monitored				
6	Explains any changes in drug regimen, if required, in response to blood analysis, other presenting factors or patient response to medication	21	8	38%
7	Provides written dosing instructions for the new drug regimen to patients	15	5	33%
8	Stresses the importance of not missing a drug dosage since this can lead to resistance	21	7	33%

G. Time Taken for ART Service Delivery

The study examined the time it took staff in the sample sites to initiate ART, monitor ART patients at follow-up visits, and dispense ARV as well as the time taken by lab staff to perform the necessary lab studies involved. Table 30 presents the average time required to initiate and maintain patients on ARV, and Table 31 presents the average time required for lab tests. In a majority of sites, ART monitoring also included provision of ARV treatment and instruction on adherence. In only one site (site number 16) were

antiretrovirals provided by a pharmacist (trained nurse) who counseled clients on how to take their medications. This counseling was provided in addition to counseling provided by trained nurses and social workers on drug usage, offered during routine ART monitoring sessions. In one other site (site number 8), a social worker dispensed ARV to clients who came for directly observed therapy.

Table 30: Mean Time Taken for Providing ART Services

Site	ART Initiation (in Minutes)	ART Monitoring (in Minutes)	ARV Dispensing (in Minutes)
2	18.4	15.4	-
5	16.3	10.9	-
8	25.5	19.4	8.0
11	No data	17.3	-
12	16.4	-	-
14	No data	18.5	-
16	31.0	12.1	2.2
17	24.2	25.0	-
Average Total Time	22.0	15.6	5.1
Average Time Taken for Achieving Better than 70% of Standard Tasks	**20 minutes**	**14 minutes**	**5 minutes***

* While timed, ARV dispensing was not evaluated according to a performance standard.

Table 31: Mean Time Taken for Laboratory Investigations

Site	2	8	14	16	17
Test	**Mean Time (in Minutes)**				
CD4	62			45	6
Viral Load*					
Liver Function	12		3	7	
Renal Function	22		16		
Full Blood Count	22	22	16	37	
Blood Sugar	7	10	9		16
Rapid Plasma Reagin (RPR)	22		16		

* Viral load technology was not operational in Rwanda at the time of data collection.

H. Summary of Major Findings for ART Services

1. Service Effectiveness

The lack of databases at sites offering HIV/AIDS care and treatment made it difficult to determine how many clients were regularly monitored according to national standards. TRAC has developed standardized ART client forms, which were in use at all sites visited. Only one site (number 8), however, has a database in which all clients are listed along with the date of scheduled and actual visits as well as CD4 count and other laboratory test schedules and results. This database was provided by the IMPACT Project and is an excellent model for other sites to follow. The database is a simple Excel file, but it enables the doctor in charge of ART care and his chief nursing staff to monitor and follow up ART client care.

2. Drug Supplies

Almost all sites have experienced problems receiving drugs in a timely manner and receiving the variety and quantity of drugs requested. The Central Medical Store (CAMERWA) is aware of the problem and is working to resolve logistics problems.

It should be noted that CAMERWA manages two types of drug supplies: free ARVs that are offered to patients who cannot pay for drugs and qualify for free services, and drugs for paying clients. A particular problem arose at site number 14, a private hospital that serves a number of paying clients. The hospital noted problems in purchasing ARVs for paying clients: Selected medications were not available in the "pay-for" supply, but CAMERWA could not provide drugs from the "free-drug" supply because of donor restrictions.

3. Service Standards

Seven of the eight HIV/AIDS care and treatment sites visited demonstrated an acceptable (70% or higher) standard of care with respect to the tasks carried out both for patients initiating ART and for clients who are already on ARVs and are returning for review.

4. Record Keeping

The records maintained by HIV/AIDS care and treatment sites are thorough, but the absence of electronic databases makes it very difficult to monitor the services provided to patients.

VI. STAFFING OF HIV/AIDS SERVICES

A. Supervision of HIV/AIDS Services

A district-level supervision system is in the process of being developed through TRAC and national level HIV/AIDS programs such as VCTI. In a few districts, selected supervisors (who are usually nominated by the district health office and are either staff members of the district health office or the district hospital) have been trained to supervise VCT and PMTCT counselors. In many cases, however, these supervisors have no prior training or experience in VCT or PMTCT counseling. One district supervisor who was in the process of being trained as a VCT and PMTCT trainer admitted to team members that, although he had previously been trained as an HIV/AIDS supervisor, he really had no idea about the technical content of what he was supposed to be supervising until his recent training as a VCT and PMTCT trainer.

Supervision of ART services is much more ambiguous. Clinicians supervise lower-level staff at the service site, but it is not clear who, aside from TRAC, is responsible for supervising physicians at district and reference hospitals or how this supervision should fit into the regular DSS supervisory system. Overall, there is little supervision of HIV/AIDS services at the facility level, although district supervisors and/or trainers are responsible for providing technical supervision and follow-up at the facility level. Only in the NGO VCT site did the team find an on-site supervisor. While a few VCT and PMTCT counselors noted that they had been supervised and given feedback since training, many had not.

B. Factors That Motivate Service Providers

The team interviewed 93 HIV/AIDS service providers (Table 32) to learn more about the factors that motivate them. These providers had been offering services over a period ranging from one to 120 months, with an average of 20 months. Of the providers interviewed: 46% stated that they provided HIV/AIDS services full-time, i.e., they provided no other health services; 6% provided less than 5 hours of HIV/AIDS services per week; 24% provided between five and 10 hours of HIV/AIDS services a week; 8% spent 10 to 20 hours per week providing HIV/AIDS services; 12% spent between 20 and 30 hours providing HIV/AIDS services; and 5% spent more than 30 hours per week providing HIV/AIDS services. Of the providers interviewed, 91% had received training to provide HIV/AIDS services.

Table 32: Cadres Interviewed

Cadre	Doctors	Nurses	Social Workers	Lab Technicians	Auxiliary Staff	Others	Volunteers	Total
Number Interviewed	7	46	13	13	9	4	1	**93**

Table 33 presents results of the staff motivation questionnaire. Despite low salaries and heavy workloads, 69% of health workers interviewed stated that they were satisfied with their jobs, and 15% stated that they were very satisfied. While many workers are happy to have paid employment, 70% of workers interviewed said that the desire to help people living with HIV and AIDS keeps them motivated to do their job. This is particularly remarkable, since only 40% of these same workers chose to become HIV/AIDS service providers in order to help people living with HIV/AIDS, while 58% were appointed.

C. Factors That Dissatisfy Service Providers

Salary emerged as the most common reason for dissatisfaction among HIV/AIDS service providers, cited by 61% of those interviewed (see Table 34). Although government workers began receiving a bonus in July 2004, most workers continue to feel that their salary is insufficient. The bonus was substantial enough to almost double the income of several categories of health workers (the amount of bonuses given to different health worker categories are included in Appendix 2) and provided greater amounts to workers in rural areas as an incentive. According to representatives of the Civil Service Ministry, the bonus is a temporary measure which will eventually be rolled into permanent salary increases.

The increase in salaries for government employees has created a problem for other health workers and health facility managers. An assessment of employment in the health workforce conducted in Phase 1 of this study showed that approximately 38% of health workers are contractual workers paid by the health facility with revenues from user fees. Up until July 2004, salaries of contractual workers and civil service employees working in the health sector were equal. In some cases, *agrée* facilities were even able to offer more than the government salary to their contractual employees and topped off salaries of government employees to maintain parity. Since the addition of the bonus to government employee salaries, however, health facilities have faced the problem of how to increase the salaries of contractual workers to equal those of the government employees. Many health facility managers state that they do not have the revenues to match the government rates. As a result, large salary differences now exist between government and contractual health workers in many facilities. Workers' frustration with salary differences is reflected in the fact that 71% of workers in *agrée* facilities (where more contractual workers are employed) stated dissatisfaction with their salary compared to 61% of workers at government-run health facilities, which tend to have a smaller ratio of contractual workers.

Table 33: Factors That Motivate Service Providers

Question/Response	Service Delivery Model		Site Ownership				
	Vertical	Integrated	Public	*Agrée*	NGO	Private	All Staff
Why did you apply for this job?							
Salary	10%	0%	0%	0%	20%	100%	1%
Benefits	0%	0%	0%	0%	0%	50%	0%
Work environment	0%	6%	6%	6%	0%	0%	5%
Work hours	0%	0%	0%	0%	0%	0%	0%
Work relationships	0%	0%	0%	0%	0%	0%	0%
Personal interest	20%	12%	10%	15%	40%	0%	13%
Desire to help PLWHA	60%	37%	35%	44%	60%	50%	40%
Appointed	30%	61%	62%	62%	20%	0%	58%
Don't know	0%	0%	0%	0%	0%	0%	0%
Other	20%	7%	6%	6%	20%	50%	9%
What keeps you going?							
Salary	20%	2%	6%	0%	20%	0%	4%
Benefits	0%	1%	2%	0%	0%	0%	1%
Work environment	20%	6%	10%	3%	20%	0%	8%
Work hours	0%	0%	0%	0%	0%	0%	0%
Work relationships	0%	6%	4%	9%	0%	0%	5%
Personal interest	30%	16%	21%	9%	40%	0%	17%
Desire to help PLWHA	90%	67%	63%	79%	80%	50%	70%
Don't know	0%	5%	4%	6%	0%	0%	4%
Other	20%	20%	23%	12%	40%	50%	20%
How satisfied are you in your job?							
Very satisfied	20%	14%	12%	12%	40%	100%	15%
Satisfied	70%	67%	77%	65%	40%	0%	69%
Neither satisfied nor unsatisfied	10%	8%	2%	18%	20%	0%	9%
Unsatisfied	0%	8%	10%	6%	0%	0%	8%
Very unsatisfied	0%	0%	0%	0%	0%	0%	0%

Workload was the second most often-cited source of dissatisfaction, mentioned by 52% of HIV/AIDS service providers. Many complained that on HIV/AIDS service provision days they were obliged to skip lunch and work late in order to attend to all the clients requesting services. The study team witnessed several cases in which service providers worked through the day and stayed late in order to provide pre-test counseling, testing, and post-test counseling to clients. This occurred even in sites with more than 10 providers trained in VCT and PMTCT. The team observed three factors that contributed to heavy workload: 1) organization of services, 2) organization of staff, and 3) infrastructure.

Table 34: Factors That Dissatisfy Service Providers

Reasons Given for Dissatisfaction	Service Delivery Model		Site Ownership				
	Vertical	Integrated	Public	*Agrée*	NGO	Private	All Staff
Salary	20%	66%	61%	71%	40%	0%	61%
Benefits	20%	22%	21%	24%	20%	0%	22%
Work environment	0%	14%	17%	6%	0%	50%	13%
Work hours	0%	12%	6%	21%	0%	0%	11%
Work load	40%	53%	42%	71%	40%	0%	52%
Treatment by management	10%	7%	4%	15%	0%	0%	8%
Work relationships	10%	2%	4%	3%	0%	0%	3%
Lack of personal interest	10%	1%	0%	0%	0%	0%	2%
Working with PLWHA	0%	2%	2%	6%	0%	0%	2%
Don't know	10%	2%	2%	6%	0%	0%	3%
Other	40%	30%	29%	29%	60%	50%	31%

Organization of Services: Most sites provide PMTCT, VCT, and ART on selected days of the week (usually two days for VCT and two for PMTCT). While this enables facility managers to organize staffing schedules, it means that a week's worth of clients come on only two days of the week, with sometimes as many as 25 to 50 clients coming for VCT or PMTCT per day. In addition, many sites wait until a majority or all clients have been counseled and have had their blood drawn in order to send samples to the lab, instead of sending samples in small batches. The team frequently observed samples arriving at the lab at lunch time; with the combination of lunch break and the time to run 20 tests, including confirmatory tests and recording results (40 minutes), the counseling clinics sometimes did not receive test results for two hours. As a result, post-test counseling sometimes began as late as 2:00 or 3:00 PM.

Organization of Staff: Although facilities may have as many as 10 providers trained to do VCT or PMTCT, these providers also offer other health services. Facilities often cannot dedicate enough staff each day to cover the clients coming for VCT and PMTCT services. Furthermore, measures do not appear to be in place for arranging for additional staff when needed. At one site that had 18 service providers trained in VCT, for example, the team witnessed one provider counsel 25 clients. When asked why she handled 25 clients alone rather than calling for assistance, the provider told the team that since few clients had come in the morning, she believed she could handle the clients on her own, and when more clients came later in the morning, her colleagues had already been allocated to other wards. It never occurred to the provider to send an assistant or an auxiliary staff member to one of the wards to request the assistance of another counselor. Furthermore, although some auxiliary staff and lay persons are being trained to provide VCT and PMTCT counseling, the team observed widespread resistance or reluctance to using these trained providers because they are non-health professionals. For example, the VCT clinic head in site number 18 would not let two trained lay counselors who were present at the clinic (both representatives of a local PLWHA organization) counsel clients because they were not trained health professionals, even though they were trained VCT service providers. Both of these issues relate to staff organization and use and not to the number of providers at the site.

Infrastructure: A lack of counseling rooms restricted the ability of many facilities to counsel clients. Sometimes there were very real space constraints, and at other times there appeared to be a lack in creativity in using existing space. At one site that had three trained providers, for example, only one could counsel clients each day because only one counseling room existed. At another site, only one counseling room was used while another remained empty and unused because it was designated as "the vaccination room," although the vaccination clinic was not open on the same day that VCT counseling was being provided.

Finally, **safety** emerged as another source of dissatisfaction among health staff interviewed. Several district managers and service delivery staff members expressed confusion and concern over the national policy and procedures for workplace exposure. They mentioned that they had no clear documentation on what to do in the event of staff member exposure though needle stick or other accident. Staff expressed frustration at what they perceived as a lack of attention to their health and safety by the government.

D. Incentives Given to Service Providers

Health workers in Rwanda are quite aware of their net pay—the amount they take home each month—but they are often less aware of what portion of this pay is their base salary and what represents various incentive payments. As of July 2004, civil service workers receive a base salary, a service bonus (prime), housing allowance, transportation allowance, and some health insurance. Civil service employees working for *agrée* institutions may also receive a bonus from the service delivery site to further increase their pay. In general, salaries and incentives paid to contractual workers correspond to the civil service pay scale and incentives payments, although some *agrée* sites offer contractual workers higher base salaries than those provided in the civil service. All sites in Rwanda try to maintain parity in salaries and incentives paid to civil service and contractual workers.

Only one site provides financial incentives to workers for HIV/AIDS services. That site, an *agrée* health center, provides PMTCT counselors with a small monthly bonus of about US$54 per counselor per year with funds provided through the support of the PRIMEII Project. These funds were not available for VCT services, which were supported by VCTI. However, like others with funding from VCTI, this site was using funds left over from salaries paid to contract workers employed through VCTI contracts in order to provide incentives to other health workers. VCTI budgets FR80,000 for A2 nurses/month. Most health facilities pay nurses hired through VCTI support the same as other workers, roughly FR54,000/month. The remaining funds from the VCTI contracts (FR26,000 per contract worker/month) are pooled and distributed equally among all service delivery staff at the end of each quarter, regardless of staff members' involvement in HIV/AIDS service provision or performance. Table 35 shows incentive payments that staff at one VCTI site reported receiving over the course of a year. In some facilities, the amount given to staff varies according to the level of the health worker (A1, A2, auxiliary, etc.). In all cases, this bonus is distinct from the Civil Service bonus provided to civil service employees (shown in Appendix 2) and any matches of this bonus provided to contract workers by health facilities.
Some public and *agrée* sites also provide bonuses to health workers with added administrative or management responsibilities, such as health center or hospital ward managers. The amount of these bonuses varies from site to site but is usually between FR7,000 and 10,000/month (US$12.25-$17.50).

E. Loss of Service Providers in the Last Year

To gain insight into the potential need for training of new staff to carry out HIV/AIDS service tasks, the study team interviewed service site managers about the number of trained HIV/AIDS staff who had left the site in the last year. Table 36 shows losses and loss rates for different categories of HIV/AIDS service providers in the last 12 months (November 2003 through October 2004). Data in this table represent only 18 of the 20 sites; information on staff losses was not available for sites number 2 and 11 (both hospitals).

Salary was the principal reason for staff losses: 67% of staff who left in the preceding 12 months had done so for higher-paying jobs; 13% were transferred from their posts; 17% left for schooling opportunities; and 4% died. Reasons for staff attrition differed by staff category and by service site type. Doctors, A1 nurses, and laboratory technicians were more likely to leave for better-paying jobs. Likewise, loss of staff was greater at hospitals, particularly referral hospitals, than it was at health centers. These data indicate that staff attrition is more likely to affect ART services than VCT or PMTCT, since ART services are more likely to involve higher-level staff and to be offered at hospitals.

Table 35: Annual Incentive Payments to Service Providers (US Dollars)

	Doctors	A1 Nurses or Social Workers	A2 Nurses or Social Workers	A3 Nurses or Social Workers	Lab Technicians	Auxiliary Staff
Civil Service Prime (Bonus)	$1,818	$727	$465	$186	Varies depending on level	$177
Civil Service Housing Allowance	$316	$144	$85	$54	Varies depending on level	$42
Civil Service Transportation Allowance	$204	$95	$53	$47	Varies depending on level	$42
Civil Service Health Insurance	$46	$59	$26	$33	Varies depending on level	$20
Bonus from VCTI Salary "Extras"*	------	------	$140	$140	$140	------
Agrée Hospital Bonus	$1,579	$316	$211	$158	No data	$105

* The amount represented here is an example from one site in which "left over" funds from salaries for contractual workers paid through VCTI contracts were distributed to all qualified staff at the health center.

Table 36: HIV/AIDS Staff Loss Rates by Cadre

Cadre	Number of HIV/AIDS Service Providers Currently at Work	Number of HIV/AIDS Service Providers who Left in the Last 12 Months	Rate of Loss
Doctors	36	7	19%
Nurses	112	10	9%
Social Workers	26	0	0%
Lab Technicians	34	4	12%
Auxiliary Staff	14	0	0%
Other	21	3*	14%
Total	**243**	**24**	**9.5%**

* Two medical assistants and one nutritionist.

VII. TRAINING OF HIV/AIDS SERVICE PROVIDERS

A. Training Received by VCT, PMTCT, and ART Service Providers

The study also looked at how many of the providers interviewed reported to have received training in HIV/AIDS service delivery as well as the current workload of those staff in terms of number of clients per trained staff. Tables 37 and 38 show the number of health workers by cadre who have received training in VCT/PMTCT and ART, respectively. Table 39 then estimates the relative workload of clients per trained staff member for the three types of HIV/AIDS services.

Table 37: Cadres Trained for VCT/PMTCT Services by Site

Site	MDs	Medical Assistants	RNs	Social Workers	Nutri-tionists	Aides and Auxiliary Staff	Other Medical Personnel	Lay Persons and Volunteers	Lab Technicians /Aides	Total Service Providers	Total, Including Lab Staff
1			2						1	2	3
2	3		18	3					2	24	26
3			7	2		3			2	12	14
4			4	1					3	5	8
5			5	1					4	6	10
6			1	1			1	9	1	12	13
7			10			4			1	14	15
8			19	2					1	21	22
9			6	1		3			1	10	11
10			4	1	1	4			2	10	12
12			22	4		13			4	39	43
13			8	1		2			2	11	13
14			1						7	1	8
15			8	1	1				3	10	13
16			3	3						6	6
17			9	2	1		1			13	13
18			4	1		1			2	6	8
19			3			2			2	5	7
20			19	1	1				4	21	25
Total	**3**	**0**	**153**	**25**	**4**	**32**	**2**	**9**	**42**	**228**	**270**

Table 38: Cadres Trained for ART Services by Site

Site	MDs	Medical Assistants	RNs	Social Workers	Nutri-tionists	Aides & Aux Staff	Other Medical Personnel	Lay Persons and Volunteers	Lab Technicians /Aides	Total Service Providers	Total, Including Lab Staff
2	10		6	3			2		2	21	19
5	3		1						No data	4	4
8	3		4	2					1	9	10
11	3		3	3					No data	9	9
12	2	2	8	4					No data	16	16
14	7								7	7	14
16	8		3	3					No data	14	14
17	7		9	1					No data	17	17
20	1		2						2	3	5
Total	**44**	**2**	**36**	**16**	**0**	**0**	**2**	**0**	**12**	**100**	**108**

Table 39: Client Load per Trained Staff Member by Type of Service

Type of Service	Number of Trained Staff	Total Number of Clients in Last Year at Sample Sites	Number of Clients per Trained Staff Member in Last Year
VCT	226	40,576	180
PMTCT	226	17,593	78
ART	100	2,756	28

Table 40 shows the number of staff trained for HIV/AIDS services who are actively providing those services in the sample sites. While some sites, such as site number 11, are only using a small fraction of trained staff to provide HIV/AIDS services, others, such as site number 17, are using staff that has not been trained to provide HIV/AIDS services.

Table 40: Number of Trained Staff for All HIV/AIDS Services Compared to Staff Active in HIV/AIDS Service Delivery

Site	Staff Trained for HIV/AIDS Services	Staff Currently Active in HIV/AIDS Service Delivery	FTE Active in HIV/AIDS Service Delivery
1	3	2	0.7
2	38	24	10.2
3	14	11	5.6
4	8	9	3.8
5	13	14	5.3
6	4	16	15.4
7	15	12	4.5
8	35	21	9.7
9	11	6	0.6
10	14	14	2.0
11	49	12	7.4
12	24	24	21.0
13	13	9	7.4
14	No data	8	5.8
15	14	4	4.2
16	14	11	5.3
17	19	28	27.5
18	8	8	5.7
19	7	6	1.0
20	26	25	5.6
Total	**329**	**264**	**149**

VIII. NATIONAL TRAINING CAPACITY

If Rwanda is to provide VCT/PMTCT and ART services to the targeted number of clients, it will need a workforce with the appropriate skills. This study thus sought to document existing training capacity and focused on:

- Institutions currently providing training
- Sites that provide pre-service and in-service training
- The type of training being provided and whether for VCT/PMTCT, ART, training of trainers (TOT), and/or laboratory services
- The structure of training programs: duration, theory, inclusion of practicum, supervision, and evaluation
- Whether curricula at training sites correspond or conform to TRAC training curricula (the best example of a national standard)

- The number of qualified trainers available at these sites and the number of trainees that can be trained per year
- The number of health providers trained in HIV-related topics to date
- The average cost of different training programs

A. Training Sites

Thirteen different training institutions were selected for the study. These sites represent all the major institutions known to be offering ongoing HIV/AIDS training, excluding some NGO and select donor-supported programs that may have private training for their own staff. A list of sites and the type of training offered at the sites is shown in Table 41.

The vast majority of VCT, PMTCT, and ART service provision training occurs through in-service training programs, although several institutions expressed their intention to expand the HIV/AIDS-related capacity of their pre-service training programs.

Pre-service training institutions that train nurses offer limited HIV/AIDS information in their integrated curriculum (noted in the table as "other") but have no VCT/PMTCT or ART-specific courses. The HIV/AIDS information included in these programs tends to be knowledge-based and not skills-based. In addition to the sites selected for this assessment, the Ministry of Health has recently reviewed four other nationally recognized nursing schools and approved them for operation. In theory, these institutions could also provide HIV/AIDS pre-service training in the future.

B. Training Program Structure

Overall, HIV/AIDS in-service training programs address VCT, PMTCT, and ART more effectively and systematically than do pre-service programs. Only the School of Medicine has a training program in which graduates leave with the skills to provide ART. Other pre-service training programs offer HIV/AIDS education and provide general information about VCT, PMTCT, and ART/OI care but do not have curricula that include counseling skills, define how much practical experience the provider should have, or evaluate service provision skills.

In-service training programs implemented by TRAC are designed to include both theory and practical experience and include a knowledge test. The expected outcome of this training is that the provider will have both the requisite skills and the knowledge to competently provide VCT, PMTCT, or ART services. Table 42 presents differences in the structure of training provided by training program site.

Table 41: HIV/AIDS Training Offered by Type and by Training Program Site

Training Institution	VCT	PMTCT	ART	Lab	TOT	Other	Pre-service	In-service	Verti-cal	Inte-grated
TRAC	✓	✓	✓		✓			✓	✓	
National Reference Laboratory				✓	Planned for 2005			✓	✓	
National University of Rwanda (NUR) School of Public Health								✓		✓
Kigali Health Institute (KHI) Evening Program for Nurses*						✓	✓	✓		✓
Center for Continuing Medical Education (CEFOCK) at KHI*						✓		✓		✓
CHK	✓	✓						✓	✓	✓
FHI IMPACT**	✓	✓		✓				✓	✓	
IntraHealth	✓	✓						✓	✓	
EGPAF	✓	✓						✓	✓	
NUR School of Medicine			✓	✓			✓			✓
Kigali Health Institute				✓		✓	✓			✓
Rwamagana School of Nursing*						✓	✓			✓
Gitwe Institute of Higher Education*						✓	✓			✓

* HIV module under development.

* FHI-IMPACT, IntraHealth, and EGPAF provide funds for all staff in their programs to be trained either by TRAC directly or by a TRAC-trained trainer. Other training provided by these institutions is in addition to this initial training.

Table 42: Training Structure by Training Program Site

Training Institution	Technical Area	Theory Days	Practicum Days	Total Days	Practicum Supervision	End-of-training Evaluation
TRAC	VCT/ PMTCT	9	4	13	✓	Written exam
TRAC	ART	9[1]	10	19	✓	Written exam
National Reference Laboratory	Lab	2	3	5[2]	✓	Written exam
NUR School of Public Health	General HIV/AIDS	NA	NA	NA	✓	Not HIV/AIDS-focused
KHI Evening Program for Nurses	General HIV/AIDS	ND	ND	ND	ND	Not HIV/AIDS-focused
CEFOCK	General HIV/AIDS	NA	NA	NA	NA	Not HIV/AIDS-specific
CHK[3]	ART	No	ND	10	✓	No
FHI IMPACT[4]	VCT/PMTCT /ART	Follows TRAC curriculum (as above)				
IntraHealth	PMTCT/ VCT	Follows TRAC curriculum (as above)				
EGPAF	PMTCT	Follows TRAC curriculum (as above)				
NUR School of Medicine	ART	NA	NA	NA	✓[5]	Not ART-specific
Kigali Health Institute	General HIV/AIDS and lab	NA	NA	NA	✓	Not HIV/AIDS-specific
Rwamagana School of Nursing	General HIV/AIDS	NA	NA	NA	✓	Not HIV/AIDS-specific
Gitwe Institute of Higher Education	General HIV/AIDS	NA	NA	NA	✓	Not HIV/AIDS-specific

ND = No data available; NA = Not applicable

[1] Based on an average. In three training cycles, days of theoretical training ranged from 8 to 11.

[2] The training lasts two weeks, with one week dedicated to HIV/AIDS and the second to tuberculosis. Only the HIV/AIDS training component is represented here.

[3] CHK is a practicum and residency site.

[4] IMPACT also provides a two-day ART training for all staff at the sites it supports so that all service providers, whether ART providers or not, understand what ART is, how it is managed, and how to refer clients.

[5] Practicum is conducted as part of routine residency. ART is included as part of routine rounds, mostly directed at in-patients and not out-patients coming for routine initiation or monitoring.

While supervision is planned as part of trainees' practicum experience, there are no clear guidelines on how many times trainees should be supervised for any of the training programs. Similarly, all sites stated that trainees are supervised and provided feedback as part of their practicum, but none of the programs has supervisory guidelines or checklists. At the National Reference Laboratory (NRL), practicums are based on pre-tested samples so that trainers can compare trainee results to NRL results.

Most training institutions focus their attention on nurses with a level of A2 or higher. Table 43 presents the criteria used by different institutions to select trainees.

Table 43: Trainee Selection Criteria by Institution

Training Program	Minimum Qualifications for Participation in In-service Training	
	Minimum Educational/ Professional Level	Other Considerations
TRAC – VCT	No minimum for VCT/PMTCT A2 nurses for TOT	
TRAC – OI/STI	A2 nurses	
TRAC – ART	A2 nurses	
National Reference Laboratory	A2 nurses*	Currently working as a laboratory technician
NUR School of Public Health	Bachelors degree	2 years work experience minimum
FHI IMPACT – VCT/PMTCT	No minimum	Must work at FHI-sponsored site
IntraHealth –VCT/PMTCT	No minimum	Must work at IntraHealth-sponsored site
EGPAF – VCT/PMTCT	No minimum	Must work at EGPAF-sponsored site
KHI Evening Course for Nurses	A2 nurses	Currently employed as a nurse
CEFOCK	For students = in secondary school For nurses = A2	

* NRL registers suggest that while many A2 nurses are being trained, some A3 nurses and some auxiliary staff and aides are also included in training programs.

C. Correspondence of Curricula to TRAC Curricula

All in-service training programs either send trainees to TRAC training programs or use the TRAC curricula and TRAC-trained trainers to conduct training. Pre-service training programs do not use the TRAC curricula or use very limited components of them; few pre-service training institutions even have copies of the TRAC guidelines and curricula on site.

D. Numbers Trained In-service and Pre-service Training

Tables 44 and 45 present information on the number of staff trained in HIV/AIDS areas (VCT, PMTCT, ART) per year. Pre-service training numbers represent the total number of students graduating from schools each year, but may not represent the number of students with HIV/AIDS knowledge or skills graduating per year. Table 46 thus represents the potential number of trainees that could be trained in HIV/AIDS knowledge and skills through pre-service training institutions in the future, rather than the current number exiting these programs.

Table 44: In-service Training Staff Trained per Year and HIV Expertise of Trainers, by Training Site

Training/Support Organization	Number of Trainers with HIV Expertise	Average Number of Trainees per Session	Number of Students Trained per Year
TRAC VCT/PMTCT	8[1]	30	150[2]
TRAC District Level VCT/PMTCT	4 per district	25	451
TRAC OI/STI	7	49	146[3]
TRAC ART	11	100	400
NUR-School of PH	12	19[4]	30[5]
NRL	3	9	147[6]
KHI Evening Program for Nurses	10 in VCT/PMTCT; none in ART	130	New program: none to date
CEFOCK	0[7]	13	No data
FHI IMPACT	0[8]	10–30	116[9]
IntraHealth	5[10]	11	55
EGPAF	1[11]	38	111[12]

[1] TRAC has eight trainers on staff and a number of others, who work mainly at major referral hospitals and who are called as trainers from time-to-time.

[2] This number was estimated based on the maximum number of trainees per session (30) and the number of sessions conducted in 2003 (five).

[3] This training began in March 2004. The data presented are for 2004 only.

[4] The school of public health has progressively increased its intake rates. Ten students were accepted in year one, 18 in year two, and 30 in year three (2004).

[5] Represents 2004.

[6] Represents 2004.

[7] Trainers hired from outside the institution.

[8] Trainers hired for each training session.

[9] Based on 2004 only.

[10] IntraHealth has five trainers on staff and hires other when needed.

[11] EGPAF has one trained trainer on staff and hires others as needed.

[12] Based on 2004 only.

Kigali Health Institute (KHI) has undergone rapid growth in enrollment since its inception in 1996. Enrollment expanded from 98 in 1996 to 973 in 2005. It is expected to further increase with the addition of other disciplines and the expansion of many disciplines of study from three-year to four-year degree programs.

Table 45: Pre-service Training Students Graduating per Year and HIV Expertise of Trainers by Institution

Training/Support Organization	Number of Trainers with HIV Expertise	Number of Students	Number of Students Graduating per Year
NUR-School of Medicine*	10	500-600	70
Kigali Health Institute	10 in VCT/PMTCT; none in ART	973 (includes 200 nurses)	245 total (includes 65 nurses and 80 laboratory technicians)
Gitwe Institute of Higher Education	None as part of regular staff; relies on visiting professors	144 (includes 105 nurses	33 nurses
Rwamagana School of Nursing	None as part of regular staff; relies on visiting professors or clinicians at the local hospital	110	40

* Data are approximations.

Tables 46-50 summarize the total number of health providers in Rwanda who have received specialized training in specific HIV/AIDS-related services. The number of individuals trained directly by TRAC represents only those individuals trained by TRAC in 2004. By this time the organization was shifting from a strategy of providing training directly to healthcare providers, to one in which they would train district level trainers who would then be responsible for training health facility staff. TRAC has no plans in the future to directly train health facility staff.

Table 46: Providers Trained in VCT/PMTCT in 2004

Institution	Total Number of Providers Trained	Average Number of Trainees per Cycle	Average Number of Trainers per Session
TRAC	208	30	11
District Trainers	451	25	4
Total	**659**	**27**	**7.5**

Table 47: Providers Trained in ART as of December 31, 2004

Institution	Doctors	Paramedical Staff (Nurses, Social Workers, Pharmacists)	Total Trained	Average Number of Trainees per Cycle	Average Number of Trainers
TRAC	143	313	456	114	14
Medical School	70/year	NA	70/year	70/year	45, including teaching assistants

Table 48: Providers Trained in OI/STI Care and Treatment as of December 31, 2004

Institution	A2 Nurses	Other Providers	Total Trained	Average Number of Trainees per Cycle	Average Number of Trainers
TRAC	146	0	146	49	7

Table 49: Providers Trained in VCT/PMTCT TOT as of December 31, 2004

Institution	A1 Nurses	A2 Nurses	Other Health Professionals	Total Trained	Average Number of Trainees per Cycle	Average Number of Trainers
TRAC	13	59	16	88*	44	11

* Includes 19 supervisors.

Table 50: Personnel Trained in HIV Laboratory Techniques as of December 31, 2004

	A1 Nurses	A2 Nurses	A3 Nurses or Lower	Nurses (Unknown Level)	Total Trained	Average Number of Trainees per Cycle	Average Number of Trainers
Totals	9	141	35	15	200	9	3

E. Training Costs

Training costs for VCT/PMTCT, ART, and laboratory training varied by training type and funding institution. Factors that contributed to differences in cost included: (1) the number of individuals trained and associated per diem paid, (2) the number of trainers participating in the training, (3) the number of trainers or participants needing accommodation, (4) training location fees (e.g., hotel used for training), (5) transportation, (6) international trainers/participants (higher overall costs), and (7) miscellaneous costs, including snacks and telephone cards. The average costs of items contributing to the expense of training are presented in Table 51.

Table 51: Contributing Costs of Training Programs

Item	Average Cost*
Per diem for participants living in Kigali	FR4,000 (US$7)/day/participant
Per diem for participants coming to Kigali for training from other parts of the country	FR10,000 (US$17.50)/day/participant
Room costs for trainers	FR10,000-30,000 (US$17.50-$52.50)/day/trainer
Transport	FR4,000-8,000 (US$7-$14)/per participant roundtrip
Meeting location	FR0–17,900 (US$31.50)/participant/day

* Exchange rates were calculated at the rate of US$1.00 = FR570 and figures rounded to the nearest half dollar.

The principal expenses associated with VCT/PMTCT and ART training are summarized in Table 52.

Per participant care and treatment (ART/OI) and training of trainer (TOT) costs tend to be higher than those for VCT/PMTCT. This is attributed mainly to the cost of the venue selected for the training and higher per diems offered to trainees. For the ART/OI training, per diem represented the second highest cost, at FR95,229 per trainee for the entire 10 days, or about US$167 per trainee.

Table 52: Average Cost of In-Service Training per Participant by Category and by Institution

Training Institution	Training Content	Number of Trainees	Average Cost per Participant for Entire Training
VCT/PMTCT Training			
TRAC (Kigali) – 10 days	VCT/PMTCT	58	$208
EGPAF (onsite) – 10 days	VCT/PMTCT	20	$125
FHI IMPACT (onsite) – 5 days	VCT/PMTCT	30	$180
IntraHealth (onsite) – 10 days	VCT/PMTCT	10	$305
ART/OI Training			
TRAC (Kigali) – 10 days	ART/OI	130	$545
Laboratory Training			
National Reference Laboratory* – 5 days	Laboratory	10	$291
TOT - VCT/PMTCT			
TRAC (Kigali) – 30 days (6 weeks)	VCT/PMTCT TOT	53	$786

* For one week dedicated to HIV; entire training is for two weeks.

Costs associated with pre-service HIV training are difficult to analyze for two primary reasons: HIV topics generally are incorporated into existing courses; and HIV pre-service training uses few supplies or

materials other than components associated with laboratory work. Most students attending the School of Medicine receive scholarships of approximately FR25,000 per month (US$44), with most of those costs are allocated to room and board, supplies, and various incidental expenses. Students attending Rwamagana School of Nursing pay approximately FR18,000 (US$32) per trimester, but this includes all costs, including tuition, room, and board; the Ministry of Education is considering raising this cost to FR25,000 (US$44) per trimester.

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APPENDIX 1: TASKS OMITTED FROM VCT, PMTCT, AND ART

1. VCT Tasks Omitted

Table A-1: Tasks Omitted from VCT: Pre-test Group IEC

Task #	Task Description	Number of Observations*	Number of Times Task Was Omitted	Percentage of Times Task Was Omitted
8	Explains what positive and negative test results mean	15	11	73%
11	Presents information about where to go for referral services and tells the client what to do for a consultation	14	10	71%
10	Discusses how a positive or negative result might affect the client	15	10	67%
16	Completes the record book	3	2	67%
9	Mentions reasons for referral (STI, OI, and other)	15	9	60%
6	Explains how an HIV/AIDS test is done	15	8	53%
4	Discusses how clients evaluate their risk	6	3	50%
7	Explains the “window period”	15	6	40%
15	Draws blood or directs the client to the person or location where his/her blood will be drawn	9	3	33%
13	Explains where and when test results will be ready	11	3	27%
2	Explains confidentiality	14	3	21%
12	Establishes whether the clients want an HIV test and obtains consent for the test to be given	6	1	17%
14	Summarizes information covered in the counseling session and asks for any further questions	15	2	13%
5	Discusses client-centered risk reduction	14	1	7%
3	Establishes what the client knows about HIV/AIDS	15	0	0%
1	Greets the client and establishes a pleasant environment for discussion	14	0	0%

* Variation in number of times tasks were observed relates to some tasks being “not applicable” for that counseling session, either because of prior information or because of information learned during the session. For example, in many cases record-keeping was “not applicable” because it had already been done prior to the IEC session.

Table A-2: Tasks Omitted from VCT: Individual Pre-test Counseling (All VCT Sites)

Task #	Task Description	Number of Observations	Number of Times Task Was Omitted	Percentage of Times Task Was Omitted
9	Identifies referral needs (STI, OI, and other)	65	57	88%
11	Gives information about where to go for referral services and tells the client what to do for a consultation	63	52	83%
7	Explains the "window period"	67	46	69%
10	Discusses how a positive or negative result might affect the client	65	45	69%
6	Explains how an HIV/AIDS test is done	66	32	48%
5	Discusses client-centered risk reduction	65	30	46%
14	Summarizes information covered in the counseling session and asks for any further questions	66	29	44%
8	Explains what positive and negative test results mean	65	25	38%
4	Helps the client to evaluate his or her risk	66	20	30%
2	Explains confidentiality	66	19	29%
3	Establishes what the client knows about HIV/AIDS	67	15	22%
13	If the client wants an HIV test, sets a time for the client to return for results	66	14	21%
12	Establishes whether the client wants an HIV test and obtains consent for the test to be given	65	7	11%
1	Greets the client and establishes a pleasant environment for discussion	67	6	9%
16	Completes the client record	62	2	3%
15	Draws blood or directs the client to the person or location where his/her blood will be drawn	67	0	0%

Table A-3: Tasks Omitted from VCT: Post-test Counseling for HIV-negative Clients (All Sites)

Task #	Task Description	Number of Observations	Number of Times Task Was Omitted	Percentage of Times Task Was Omitted
9	Helps the client identify problems and solutions or resources	41	33	80%
7	Re-explains the window period	41	27	66%
12	Identifies referral needs and gives guidance on what to do for referral	41	23	56%
2	Asks if the client has any questions or concerns and responds to any issues the client raises	41	21	51%
13	Summarizes and asks for any further questions	41	16	39%
6	Assesses the client's level of understanding and upgrades knowledge if necessary	43	16	37%
5	Observes the reaction of the client and provides support (allows time for the expression of feelings)	43	15	35%
11	Helps the client to formulate a plan of action for risk reduction	41	14	34%
14	Completes the client record	32	10	31%
10	Encourages the client to encourage his/her partner to come for testing	37	11	30%
8	Reiterates information on HIV prevention	43	10	23%
3	Confirms that the client wants the test results and checks for readiness	43	7	16%
1	Greets the client and establishes a pleasant environment for discussion	43	4	9%
4	Reveals the test results	43	0	0%

Table A-4: Tasks Omitted from VCT: Post-test Counseling for HIV-positive Clients (All Sites)

Task #	Task Description	Number of Observations	Number of Times Task Was Omitted	Percentage of Times Task Was Omitted
8	Helps the client to identify problems and solutions or resources	21	15	71%
14	Identifies referral needs and gives guidance on what to do	21	13	62%
9	Discusses partner notification and testing with the client	17	10	59%
11	Reiterates information on the protection of others	20	11	55%
16	Completes the client record	20	10	50%
6	Assesses the level of understanding and upgrades knowledge as necessary	21	10	48%
15	Summarizes and asks for any further questions	21	9	43%
13	Gives information on other PLWHA support services and where they are available	21	9	43%
2	Asks if the client has any questions or concerns and response to any issues the client raises	20	7	35%
10	Helps the client to formulate a plan of action to fulfill medical, social and psychological needs	21	6	29%
12	Gives information about ARV treatment and where it is available	21	5	24%
5	Observes the reaction and provides support (allows time for the expression of feelings)	21	5	24%
4	Reveals the test results	21	4	19%
7	Helps the client understand how to live “positively”/gives guidance on living longer (i.e., hygiene, nutrition, etc.).	21	4	19%
3	Confirms that the client wants test results and checks readiness	21	1	5%
1	Greets the client and establishes a pleasant environment for discussion	21	0	0%

2. PMTCT Tasks Omitted

Table A-5: Tasks Omitted from PMTCT: Pre-test IEC

Task #	Task Description	Number of Observations	Number of Times Task Was Omitted	Percentage of Times Task Was Omitted
11	Completes the client record (register book)	3	2	67%
2	Provides general information on pregnancy	11	6	55%
8	Provides information on other reproductive health services including family planning	11	6	55%
5	Explains the HIV test and what positive and negative test results mean	11	5	45%
10	Draws blood or directs the client to the person or location where his/her blood will be drawn	8	3	38%
7	Discusses the importance of monitoring HIV status with one's partner and of the partner getting tested	11	3	27%
1	Greets the group and establishes a pleasant environment for discussion	11	2	18%
4	Discusses the advantage of pregnant women knowing their status so they can prevent transmission to their child	11	1	9%
9	Summarizes information covered in the IEC and asks for any further questions	11	1	9%
3	Establishes what the clients know about HIV/AIDS and STI transmission and prevention (including PMTCT)	11	0	0%
6	Discusses options for care and treatment for HIV-positive clients	11	0	0%

Table A-6: Tasks Omitted from PMTCT: Pre-test Counseling (All VCT Sites)

Task #	Task Description	Number of Observations	Number of Times Task Was Omitted	Percentage of Times Task Was Omitted
8	Talks about the importance of choosing a feeding method if HIV-positive	48	39	81%
10	Provides information discusses options for family planning	48	37	77%
12	Explains the window period	49	37	76%
14	Identifies referral needs (for STI, OI, and other needs)	49	36	73%
9	Talks about the importance of continual follow-up for HIV-positive couples, mothers and children	48	36	75%
6	Discusses the availability of ARV as treatment and prophylaxis	48	36	75%
7	Emphasizes the importance for HIV-positive women to give birth at a health facility	48	30	63%
15	Discusses with the client how a positive or negative result will affect the client and baby	48	27	56%
16	Provides referral information and what the client should do for referral	43	24	56%
19	Summarizes information covered in the counseling session and asks for any further questions	48	25	52%
2	Explains confidentiality	49	20	41%
5	Discusses the advantage of pregnant women knowing their status so they can prevent transmission to the child	49	22	45%
4	Helps the client to evaluate his or her risk	49	19	39%
11	Explains how the HIV test is done	49	19	39%
13	Explains what positive and negative test results mean	49	12	24%
18	If the client wants an HIV test, sets a time for the client to return for results	45	12	27%
17	Confirms the client wants an HIV test and sets a time for the client to return for results	45	11	24%
1	Greets the client and establishes a pleasant environment for discussion	49	5	10%
3	Explains confidentiality	49	7	14%
21	Completes the client record	49	2	4%
20	Draws blood or directs the client to the person or location where his/her blood will be drawn	45	2	4%

Table A-7: Tasks Omitted from PMTCT: Post-test Counseling for HIV-negative Clients (All VCT Sites)

Task #	Task Description	Number of Observations	Number of Times Task Was Omitted	Percentage of Times Task Was Omitted
8	Helps the client to identify problems and solutions or resources	27	25	93%
10	Identifies referral needs and gives guidance on what to do	25	20	80%
11	Summarizes and asks for any further question	28	12	43%
4	Observes the client reaction and provides support (allows time for expression of feelings)	27	11	41%
9	Helps client formulate a plan of action for remaining HIV-negative	28	9	32%
7	Asks the client if she knows her partner's status and, if not, encourages the client to encourage her partner to get tested	27	7	26%
12	Completes the client record	19	5	26%
1	Greets the client and establishes a pleasant environment for discussion	28	6	21%
6	Discusses importance of and ways to remain HIV-negative	28	6	21%
2	Confirms that the client wants test results and checks readiness	28	5	18%
5	Assesses the client's level of understanding and upgrades knowledge if necessary	28	5	18%
3	Reveals the test result	28	0	0%

Table A-8: Tasks Omitted from PMTCT—Post-test Counseling for HIV-positive Clients (All VCT Sites)

Task #	Task Description	Number of Observations	Number of Times Task Was Omitted	Percentage of Times Task Was Omitted
17	Explains to the mother about Cotrimoxazole prophylaxis for infants from 6 weeks to 12 months of age	9	9	100%
9	Discusses family planning	9	7	78%
16	Tells mother she must bring her newborn child in for Nevirapine syrup within 72 hours after delivery*	9	7	78%
11	Helps client to identify problems and solutions or resources	10	7	70%
8	Counsels client on infant feeding option	10	5	50%
7	Gives information about PMTCT treatment/prophylaxis	9	4	44%
6	Discuss informing partner of status	10	4	40%
10	Reiterates information on protection of self and others	10	4	40%
13	Gives guidance on living longer	10	4	40%
14	Asks if the client wishes to receive treatment	10	4	40%
15	Gives client Nevirapine tablet and tells her when to take it	8	3	38%
5	Assesses level of understanding on significance of result and implications for her and the child	9	3	33%
18	Checks gestation period	9	2	22%
19	Summarizes and asks for any further questions	10	2	20%
2	Confirms that the client wants test results and checks readiness	10	2	20%
12	Helps the client to formulate a plan of action	10	2	20%
20	Completes the client record	6	1	17%
1	Greet the client and creates a pleasant environment for discussion	10	1	10%
3	Reveals the test results	10	0	0%
4	Observes the client's reaction and provides support	9	0	0%

* Observations were only conducted of counseling for new ANC clients. Team members asked counselors why they did not stress the importance of bringing the infant to a facility for Nevirapine. Counselors stated that they covered this topic in later counseling sessions, when the pregnant client returned for follow-up service.

3. ART Service Provision Tasks Omitted

Table A-9: Tasks Omitted from Initiating Patients on ARV Treatment

Task #	Task Description	Number of Observations	Number of Times Task Was Omitted	Percentage of Times Task Was Omitted
2	Conducts a comprehensive exam and checks for current infection	15	5	33%
8	Seeks a way of ensuring patient compliance with the ARV regimen	14	4	29%
9	Asks if patient has any questions and answers any questions posed	16	4	25%
11	Completes client record (*dossier VIH*)	13	3	23%
6	Discusses possible side effects and how to handle them	14	3	21%
3	Explains any problems found and prescribes treatment	14	3	21%
5	Provides written dosing instructions to patients	13	2	15%
7	Stresses importance of not missing a drug dosage and not discontinuing treatment	14	1	7%
1	Greets client and creates a pleasant environment for discussion	16	1	6%
10	Schedules next test/review visit two-weeks after initiation	13	0	0%
4	Explains or reiterates how and when to take prescribed drugs	14	0	0%

Table A-10: Tasks Omitted from Monitoring Patients on ARV Treatment

Task #	Task Description	Number of Observations	Number of Times Task Was Omitted	Percentage of Times Task Was Omitted
6	Explains any changes in drug regimen, if required, in response to blood analysis, other presenting factors or patient response to medication	21	8	38%
7	Provides written dosing instructions for the new drug regimen to patients	15	5	33%
8	Stresses the importance of not missing a drug dosage since this can lead to resistance	21	7	33%
9	Asks if patient has any questions and answers them	21	7	33%
11	Schedules next test or review visit at appropriate interval	17	4	24%
12	Completes the client record	20	3	15%
5	Asks about client's adherence to drug regimen and seeks a way of ensuring patient compliance with the ARV regimen (relative, support group, etc.)	21	3	14%
10	Arranges for appropriate lab work to be conducted	9	1	11%
3	Explains any problems found and prescribes treatment	21	2	10%
4	Asks about any side effects of the current ARV drug regimen	21	1	5%
1	Greets client and creates a good environment for discussion	21	1	5%
2	Checks for current infection or other problem (diarrhea, oral thrush, chest conditions, TB, headache, fever, skin diseases, swollen joints, weight loss, STI)	21	0	0%

APPENDIX 2: CIVIL SERVICE MONTHLY PRIMES (BONUSES)

Table A-11: Primes (Bonuses) Provided to Civil Service Health Workers As of July 2004

Type and Level of Worker	Allowance in FR (in USD*)	Tax in FR (in USD)	Allowance without Tax in FR (in USD)
Doctors			
Specialist Rural	251,250 (441)	58,600 (103)	192,650 (338)
Specialist Non-clinician Rural	216, 250 (379)	48,800 (86)	167,450 (294)
Specialist Kigali	188,250 (330)	40,960 (72)	147,290 (258)
Specialist Non-clinician Kigali	153,250 (269)	31,160 (55)	122,090 (214)
Generalist Rural	90,780 (159)	14,030 (25)	76,750 (135)
Generalist Kigali	73,140 (128)	9,800 (17)	63,340 (111)
Pharmacists			
Specialist Rural	61,380 (108)	6,380 (11)	55,000 (96)
Specialist Kigali	55,500 (97)	5,850 (10)	49,650 (87)
A0 Rural	47,268 (83)	4,200 (7)	43,068 (76)
A0 Kigali	39,036 (68)	2,550 (4)	36,486 (64)
A1 Rural	37,860 (66)	2,325 (4)	35,535 (62)
A1 Kigali	28,452 (50)	1,170 (2)	27,282 (48)
Dental Workers			
A0 Rural	47,268 (83)	4,200 (7)	43,068 (76)
A0 Kigali	39,036 (68)	2,550 (4)	36,486 (64)
A1 Rural	37,860 (66)	2,325 (4)	35,535 (62)
A1 Kigali	26,100 (46)	885 (2)	25,215 (44)
Nurses			
A1 Rural	37,860 (66)	2,325 (4)	35,535 (62)
A1 Kigali	26,100 (46)	885 (2)	25,215 (44)
A2 Rural	22,572 (40)	465 (1)	22,107 (39)
A2 Kigali	15,000 (26)	0	15,000 (26)
A3 Rural	9,000 (16)	0	9,000 (16)
A3 Kigali	8,000 (14)	0	8,000 (14)
Other Workers			
A0 Rural	49,620 (87)	4,675 (8)	44,945 (79)
A0 Kigali	39,036 (68)	2,550 (4)	36,486 (64)
A1 Rural	37,860 (66)	2,325 (4)	35,535 (62)
A1 Kigali	26,100 (46)	885 (2)	25,215 (44)
A2 Rural	22,572 (40)	465 (1)	22,107 (39)
A2 Kigali	15,000 (26)	0	15,000 (26)
A3 Rural	9,000 (16)	0	9,000 (16)
A3 Kigali	8,000 (14)	0	8,000 (14)
A4 Rural	8,500 (15)	0	8,500 (15)
A4 Kigali	7,500 (13)	0	7,500 (13)

*Exchange rate of FR570 = US$1.00, figures rounded to the nearest dollar.

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